ANNUAL PUBLIC HEALTH REPORT

OF THE

PROVINCE OF BIHAR

FOR THE YEAR

1939

AND THE

ANNUAL VACCINATION REPORT

FOR THE YEAR

1939-40.

BY

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Boundary:- Division
do District
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ANNUAL PUBLIC HEALTH REPORT

OF THE

Province of Bihar for the year 1939.

CHAPTER I.

METEOROLOGY, PRICES OF GRAINS, ETC.

1. *Rainfall.*—The following short account of the meteorological conditions in the province during the year 1939 is extracted from the report of the Director-General of Observatories :—

The total rainfall in January was 0·17″ in Bihar and 0·92″ in Chota Nagpur. The mean maximum temperature was about normal in Bihar.

The total rainfall in February was in large excess by 1·34″ in Bihar and in moderate excess by 0·57″ in Chota Nagpur. The mean cloud amount was in excess in Bihar.

The total rainfall in March was in slight defect by 0·07″ in Bihar and in moderate excess by 0·31″ in Chota Nagpur. The mean maximum temperature was below normal in Chota Nagpur. The mean cloud amount was in excess in Bihar and Chota Nagpur.

The month of April was characterised by moderate to large defect of rainfall over the plains of northern India, due to the comparatively feeble activity of western disturbances. The total rainfall in the month was 0·56″ in Bihar and 0·77″ in Chota Nagpur. Day temperatures were appreciably above normal during the second half of the month in Bihar and the mean maximum temperature was also above normal in Bihar. The mean humidity was in defect in Chota Nagpur and Bihar. The mean cloud amount was in excess in Chota Nagpur and in defect in Bihar.

Averaged over the plains of India the total rainfall in May was in defect by 39 per cent. It was in defect by 1·46″ in Bihar and by 1·96″ in Chota Nagpur. Day temperatures were appreciably above normal in Bihar on the first six days of the month and were also above normal in Bihar on the last three days of the month and in Chota Nagpur between the 16th and 18th and again between the 24th and 29th. The mean maximum temperature alone was above normal in Chota Nagpur. The mean relative humidity was in defect in Chota Nagpur. The mean cloud amount was in excess in Chota Nagpur.

The total rainfall in June was normal in Bihar and in slight excess in Chota Nagpur. Averaged over the plains of India, the rainfall for the month was in defect by 12 per cent. Day temperatures were above normal in Bihar and Chota Nagpur. The mean cloud amount was in excess in Chota Nagpur.

The total rainfall in July was 12·66″ in Bihar and 12·79″ in Chota Nagpur. Strong to vigorous monsoon conditions prevailed in and around Chota Nagpur on 21st and 22nd.

The total rainfall in August was 12·90″ in Bihar and 12·73″ in Chota Nagpur. It was in slight defect in Bihar and in slight to moderate excess in Chota Nagpur.

The total rainfall in September was in moderate excess by 2·38″ in Bihar and in slight excess by 1·62″ in Chota Nagpur.

The total rainfall in October was in excess in Bihar by 0·20″ and in excess in Chota Nagpur by 1·64″. The mean humidity of the month was in excess in Chota Nagpur.

The total rainfall in November was in defect by 0·31″ and 0·45″ in Bihar and Chota Nagpur, respectively. Night temperatures were below normal in Bihar and Chota Nagpur between the 20th and 23rd. The mean cloud amount was in excess in Bihar.

The total rainfall in December was in defect by 0·12" and 0·19" in Bihar and Chota Nagpur, respectively. The mean maximum temperature was above normal in Bihar. The mean cloud amount was in excess in Chota Nagpur and Bihar.

The total rainfall during the year in Bihar and Chota Nagpur was 49·44" and 57·60", respectively, as against 55·13" and 41·59", respectively, in the previous year.

2. *Price of common grains.*—The average price of common rice during the year increased to 15 seers in the district of Ranchi from 8¼ seers in Bhagalpur district but in majority of the districts it remained over 11 seers as against 12 seers in the previous year.

The following statement shows the average monthly price of common rice at the headquarters of the districts of the whole province for the year 1939 :—

Statement showing the monthly average price of common rice (cheapest) at the headquarters market in the districts of Bihar for the year 1939.

Districts.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
1	2	3	4	5	6	7	8	9	10	11	12	13
	Sr. ch.	Sr. ch.	Sr. ch.	Sr. ch.	Sr. ch.	Sr. ch.	Sr. ch.	Sr. ch.	Sr. ch.	Sr. ch.	Sr. ch.	Sr. ch.
Patna ...	13 8	13 8	13 6	13 6	13 2	13 2	13 2	12 14	11 10	11 6	10 12	10
Gaya ...	12 12	13 0	12 8	12 8	12 4	11 12	12 12	12 0	11 0	11 12	12 0	11
Shahabad ...	13 0	13 8	13 0	13 0	13 0	12 0	12 0	11 12	11 0	11 0	11 0	10
Saran ...	11 0	10 12	11 0	11 0	11 0	10 8	10 8	10 12	10 8	9 14	9 12	10
Champaran ...	12 0	11 8	11 0	11 0	10 0	9 8	10 2	9 14	9 6	11 4	11 6	11
Muzaffarpur ...	10 0	10 0	10 0	10 0	10 0	9 8	9 8	9 0	9 8	9 4	9 0	9
Darbhanga ...	10 8	10 12	11 4	(a) 11 0	10 8	10 0	10 0	10 0	9 10	9 0	9 4	9
Monghyr ...	11 0	11 0	11 0	11 0	10 10	10 4	10 0	10 0	9 8	9 4	9 12	10
Bhagalpur ...	12 0	11 12	11 4	11 0	10 8	9 12	9 4	9 6	8 8	8 8	8 4	8
Purnea ...	12 8	11 8	12 4	12 0	11 8	12 0	11 0	10 8	9 8	9 4	10 8	10
Santal Parganas	14 12	14 12	14 0	13 8	12 4	12 0	11 12	11 12	12 4	11 12	12 8	12
Hazaribagh ...	12 12	13 0	13 0	12 12	10 12	10 12	10 6	10 8	10 4	9 12	12 8	11
Ranchi ...	14 0	14 8	14 0	14 0	13 8	12 10	11 0	10 0	10 8	(b) 11 0	15 0	13
Palamau ...	13 4	14 0	13 4	13 0	12 4	11 12	11 6	11 4	11 12	12 0	11 8	12
Manbhum ...	13 8	13 8	13 0	13 0	11 8	11 4	9 12	10 4	10 8	10 0	12 0	13
Singhbhum ...	14 0	13 12	13 4	13 8	13 0	13 0	11 6	10 12	11 8	12 4	14 4	13

(a) Price for the fortnight ending 15th April 1939.
(b) Price for the fortnight ending 15th October 1939.

CHAPTER II.

VITAL STATISTICS.

1. The population of the province at the census taken in February 1931 was 32,371,434. This figure has been used to calculate the various ratios in the report.

The mid-year population as ascertained by the natural increase method, i.e., by addition of excess of births over deaths from the 1st July 1938 to 30th

June 1939 was 35,436,728 as against 35,073,000 of the previous year. The figure for emigration and immigration is not correctly obtained nor is the method for recording births and deaths free from defect. Every year a large number of labourers emigrate from this province to Bengal and Assam, but their exact number is not definitely available. This figure as stated here cannot, therefore, be regarded as quite accurate.

2. The estimated population for the year under review was 35,040,042 as against 34,706,466 of the previous year. The figure has been calculated on the assumption that the population has increased by arithmetical progression. The following two statements record the estimated population in various age groups and also the ratios of births and deaths from the chief diseases calculated on the estimated population of 1939.

STATEMENT A.

Population according to age group of the province of Bihar.

—	1		2		3		4		5	
	Under 1 year		One and under 5 years.		5 and under 10 years.		10 and under 15 years.		15 and under 20 years.	
	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.
Census, 1921 ...	428,171	430,762	1,242,286	1,359,885	2,379,710	2,283,361	1,839,157	1,512,999	1,218,397	1,124,128
Do. 1931 ...	389,476	396,266	1,996,260	2,110,112	2,330,522	2,129,096	2,005,728	1,767,032	1,322,530	1,361,558
Decennial increase or decrease.	—38,695	—34,496	+753,974	—750,227	—49,188	—159,265	+166,571	+254,033	+104,133	+237,430
Annual increase or decrease, 1939.	—30,952	—27,600	+603,176.	+600,184	—39,352	—127,408	+133,256	+203,224	+83,204	+189,944

6		7		8		9		10	
20 and under 30 years.		30 and under 40 years.		40 and under 50 years.		50 and under 60 years.		60 years and upwards.	
Male.	Female.	Male.	Female.	Male.	Female.	Male.	F9male.	Male.	Female.
2,288,042	2,509,809	2,119,934	2,208,112	1,473,372	1,458,625	818,288	851,054	655,716	876,508
2,763,352	2,894,276	2,341,958	2,314,501	1,595,753	1,513,295	904,766	913,225	594,542	727,186
+525,310	+384,467	+222,024	+106,389	+122,381	+54,670	+86,478	+62,171	—61,174	—149,322
+420,248	+307,576	+177,616	+85,112	+97,904	+43,736	+69,184	+49,736	—48,936	—119,756

STATEM:NT B.

Ratio of births and deaths from chief diseases calculated on the estimated population of 1939.

	Male.	Female.	Total.
Births	15·8	14·9	30·7
Total deaths	22·3	20·1	21·2
Cholera	0·4	0·4	0·4
Small-pox	0·2	0·2	0·2
Plague	0·04	0·06	0·06
Fevers	18·5	16·3	17·2
Dysentery and Diarrhœa	0·1	0·09	0·1
Respiratory diseases	0·1	0·07	0·06

3. *Births.*—The total number of births in this province during 1939 was 1,077,783 (554,244 males and 523,539 females) as compared with 1,116,178 in 1938. This means a decrease of 38,395 births or 1·2 per thousand population during the year, over those recorded in the preceding year. The provincial birth-rate for the year 1939 was 33·3 as compared with 34·5 in 1938. The average birth-rate for the last ten years was 33·9.

The statement below gives figures regarding birth-rates in this and other provinces of India.

Province.	Birth-rate per mille of population, 1939.
Bihar	33·29
Orissa	34·92
Bengal	32·02
United Provinces	36·26
Central Provinces	32·28
Punjab	40·82
Bombay	43·16
Madras	38·53
Burma	35·34
Assam	28·44
North-West Frontier Province	30·35
Sind	20·83

4. *Birth Registration.*—The highest birth-rate 45·6 was recorded in the Gaya district and the lowest birth-rate 21·4 in the district of Santal Parganas. The municipalities of Siwan, Tikari and Revelganj registered the highest birth-rates, namely 50·3, 40·6 and 43·0, respectively; whilst the municipalities of Sahebganj, Madhupur and Deoghar registered the lowest rates, viz., 4·4, 5·6 and 6·6.

The rural and urban areas of the province recorded 1,051,425 and 26,358 births, the mean birth-rates for these areas being 33·9 and 19·7 per mille population, respectively.

The birth-rates recorded in the majority of the districts and towns came to very near the mean figures. The average does not appear to be appreciably affected because variations of both high and low rates have been few and confined only to small populations.

5. *Deaths.*—The total number of deaths in the province during the year under review was 744,765 (395,388 males and 349,377 females) as compared with 763,733 in the previous year. Out of these 727,226 deaths were recorded in the rural areas and 17,539 in the urban areas. The total deaths show a decrease of 18,968 deaths or 0·6 per mille of the total population over those recorded in the preceding year. The provincial death-rate for 1939 was 23·0 as compared with 23·6 in 1938. The average death-rate for the last decennium shows a slight increase and was recorded to be 23 2 as against 23·1 of the previous year. The statement below shows comparative death-rates in this and the other provinces :—

Province.	Death rate per mille of population, 1939.
Bihar	23·00
Orissa	28·18
Bengal	21·85
United Provinces	23·09
Central Provinces	38·07
Punjab	22·15
Bombay	27·55
Madras	25·26
Burma	25·09
Assam	19·25
North-West Frontier Province	18·74
Sind	11·55

6. *Death Registration.*—The highest death-rates were recorded in the districts of Gaya, Purnea and Shahabad as 28·3, 26·4 and 25·2, respectively, whilst the lowest death-rates were recorded in Singhbhum and Manbhum districts as 14·7 and 16·7, respectively. Amongst the towns in the province the highest death-rates were recorded in Gaya (40·4), Purnea (25·7) and Tikari (24·0), and the lowest in Dinapur Nizamat (2·0) and Sahebganj (2·4) and Dumraon (1·7). The average death-rate of the rural areas was 23·4 and of the urban areas 13·2. Thus the rural death-rate was higher than that of the urban by 10·2.

The rate of increase in the population, i.e., the excess of the birth-rate over the death-rate in the province was 10·3 as compared with 10·9 in the previous year.

7. *Mortality according to age, class and sex.*—The mortality-rate based on the census figures of 1931 was 172·2 for male infants and 138·7 for female infants under one year of age per mille population as compared with the corresponding figures of 190·2 and 150·7 of the previous year. But when calculated from the actual births recorded during 1939 the mortality rate for infants under one year was found to be 120·99 for males and 105·02 for females per mille with the total infant mortality rate of 113·2 per mille as against the corresponding total of 119·8 in 1938. This shows that the rate decreased by 6·6 per mille during the year as compared with that of the previous year. The mortality amongst males was higher than that amongst females in the ratio of 122 to 100.

There were, as usual, considerable differences in the death-rates amongst the different communities. The death-rate was highest amongst the Hindus (23·1) and lowest amongst the Budhist (0·0). A death-rate of 20·8 was recorded among the Muslims and 16·6 among the Christians while that of the other classes was 21·9.

8. *Verification of the registration of vital occurrences.*—Registration of vital occurrences is compulsory in all the municipal areas of the province. The accuracy of 18,702 vital occurrences was investigated and verified by the health officers and the vaccination inspecting staff during the year and out of these 29 omissions were detected. Prosecutions were instituted in nine cases and one case of conviction was reported. The registration of vital occurrences is not compulsory in rural areas. The reporting agency in the rural areas as well as in the municipal areas remains to be the police. The machinery for reporting vital statistics in the rural areas continues to consist of the village chaukidars who attend their respective thanas on parade days to report the vital occurrences of their respective villages. The collection of vital statistics through the agency of the illiterate village staff although prevalent almost all over India, remains defective, specially with regard to the classification of causes of deaths. The village chaukidars while reporting deaths have also to state cause of deaths based on the diagnosis made by themselves or that by any other lay villager or by some illiterate member of the family of the deceased.

With the appointment of health officers as Registrars of Births and Deaths in some of the bigger municipalities, namely, Bhagalpur, Patna City, Ranchi, Muzaffarpur and Patna Administration Committee, the responsibility of collection, tabulation and verification of vital occurrences has been transferred in recent years to the health staff of these local bodies. This measure has brought about a distinct improvement in the registration of vital statistics in these areas and with the appointment of better trained health personnel, it should be possible for the other municipalities of the province to undertake this responsibility with efficiency. A partial transfer has also been effected in Gaya, Chapra and Muzaffarpur municipalities where both the municipality and the police report these statistics separately. The figures supplied by the police and those by the municipal health staff are compared and cases of under and over-reporting are verified. The results show that the figures collected by the staff of the municipalities are more accurate. It is expected that, as more and more municipalities appoint their health officers, they will

realize the importance of accuracy in statistical records and will do all in their power to effect improvement in the existing machinery with a view to assume full responsibility of this task independent of the police.

Verification of vital statistics in rural areas.—In rural areas 135,620 vital occurrences were verified by the vaccination staff as against 133,951 in 1938. 1,321 omissions were detected. In the rural parts of the country, specially in the districts where suitable health organisation under a district health officer is not maintained verification of vital statistics and their accurate registration become difficult, but in the districts where such officers are employed, they check the figures supplied by the vaccinators and the Civil Surgeons compare the police figures with those furnished by the health officers.

9. *Publication of vital statistics.*—The vital statistics for all municipal towns in the province with a population of over 10 thousand was as usual regularly published during the year. Weekly epidemic reports from all the districts showing attacks and deaths from cholera, small-pox and plague were published regularly in the *Bihar Gazette* and also in some of the important newspapers.

By the publication of these statistics the general public is kept informed of the actual state of health of the larger towns and of the prevalence of epidemic diseases in the districts. Publicity of this kind also demonstrates the utility of accurate vital statistics and helps to create an interest in the minds of the people for the actual state of public health.

CHAPTERS III AND IV.

STATE OF PUBLIC HEALTH IN THE PROVINCE AND HISTORY OF THE CHIEF DISEASES—EPIDEMIOLOGY.

1. *Comparative incidence of the chief diseases.*—The undermentioned statement compares the ratios under the chief heads of mortality of 1939 with the average ratio of the previous ten years :—

	Urban.		Rural.		Combined.	
	Ten years' average.	1939.	Ten years' average.	1939.	Ten years' average.	1939.
1	2	3	4	5	6	7
Cholera ..	0·6	0·3	1·3	0·5	1·3	0.5
Small-pox ..	0·5	0·4	0·4	0·2	0·4	0·2
Plague ..	0·06	0·08	0·1	0·06	0·1	0·06
Fevers ..	6·6	0·6	18·0	19·2	17·6	18·6
Dysentery and Diarrhœa.	0·6	0·6	0·1	0·1	0·1	0·1
Respiratory diseases..	0·5	0·5	0·07	0·08	0·09	0·09
Injuries ..	0·4	0·5	0·3	0·2	0·3	0·2
All other causes ..	4·3	4·6	3·3	2·7	3·3	2·8
Total ..	13·7	13·1	23·7	23·4	23·3	23·0

The death-rate has decreased from 23·6 in 1938 to 23·0 per mille population in 1939. The highest death-rate 18·6 was recorded from fevers. Deaths from malaria are included under the heading of " Fevers " and as malaria prevailed in epidemic form in several districts of the province during the year under review, it is presumed that the increased death-rate from fevers was chiefly due to greater number of deaths from this disease.

The urban areas, except a few small municipal towns, continued to record proportionately less number of deaths from cholera and fevers. This is obviously due to the maintenance of better standard of sanitation in the municipal towns, but the urban rates from the respiratory diseases again exceeded those recorded in the rural areas. The deaths from pulmonary tuberculosis, pneumonia and bronchitis following influenza are all reported under the head " Respiratory diseases ". Although no means exist to know the exact number of deaths from each of these diseases, it is presumed that a big proportion of these deaths was caused by pulmonary tuberculosis. The chief reason for higher death-rates from pulmonary tuberculosis in the urban areas of the province may be ascribed to overcrowding, malnutrition and lack of fresh air. Public opinion has been greatly roused in recent years against the scourge caused by this disease. Tuberculosis has been added to the list of notifiable diseases under the Municipal Amendment Act of 1935.

2. *Cholera statistics.*—The death-rate from cholera was 0·4 per mille in 1938 and 0·5 per mille in 1939. The districts of Shahabad and Purnea recorded the highest death-rate, viz., 1·8 and 1·0, respectively. Amongst the towns Colgong (2·8) and Barh (2·3) reported highest death-rates.

3. *Cholera in the province.*—The total number of deaths from cholera in the province was 16,771 in 1939 as compared with 14,750 in 1938. The districts of Shahabad and Purnea registered highest number of deaths from this disease during the year, namely 3,644 and 2,266 deaths, respectively. Of the other districts Bhagalpur, Santal Parganas and Monghyr recorded 1,935, 1,916 and 1,620 deaths from cholera during the year, respectively. The disease started in sporadic form in all these districts from March and prevailed till the end of the year. The maximum intensity was reached in all of them in August except in the district of Purnea.

4. *Cholera preventive measures.*—Although it is commonly realised that without protected water-supplies and efficient conservancy, it is difficult to arrange for an effective control of the spread of infection in village areas, a definite progress has been made in recent years in checking the outbreaks of cholera from taking an explosive turn, specially in the districts which have employed well trained health personnel under qualified health officers. Ten districts continued to employ health officers with suitable subordinate health staff during the year and there were, as usual, fewer demands for epidemic doctors to control cholera from these districts. But when the outbreak became widespread and the district staff were found to be inadequate to cope with the situation, temporary epidemic doctors had to be detailed from the department. 35 Government epidemic doctors were detailed on epidemic duty during the year in the cholera-affected areas.

Stock of disinfectants such as Bleaching Powder and Permanganate of Potash and also of choleraphage are kept in reserve at the offices of the district boards and the municipalities. In cases where the stocks get exhausted and the local bodies are not in a position to replenish them, the Civil Surgeons and the executives of the local bodies send requisitions for these to the Director of Public Health who supplies them. Anti-cholera inoculation has now become a popular preventive measure and people are pitching faith in increasing degree in its efficacy, with the result that a great many persons now come forward of their own accord to offer themselves for inoculation. Government maintain a large stock of cholera vaccine at the Vaccine Depot, Namkum. The Superintendent, Vaccine Depot, is generally asked by telegram to despatch the vaccine immediately it is required anywhere in the province.

The number of doses of cholera vaccine issued during the year was 913,715 as against 593,375 doses during the previous year. The use of choleraphage for the prevention and treatment of cholera is dealt with in Chapter XIV.

5. *Small-pox.*—The total number of deaths from small-pox during 1939 was 8,362 as compared with 5,977 in 1938. The mortality-rate for the year 1939 was 0·2 as against 0·2 of the last year. From a study of mortality-rate from small-pox from 1922 to 1939 it appears that the lowest number of deaths from this disease was recorded in the province in 1922. The number of deaths then gradually increased every year till the maximum was reached in 1926. The figure then declined annually till the lowest was touched in 1929 with another gradual rise and a peak rise in 1933. From 1934 onwards, a gradual lowering in the yearly deaths from this disease was again experienced and 1937 has recorded the lowest number of deaths since the last peak rise. A cyclic rise appears to be well marked in the epidemicity of small-pox in the province. The exact cause of this cyclic rise is not definitely understood, but it is believed that the effect of vaccination wears out with the passage of time usually five to seven years, with the result that greatest accumulation of susceptible individuals occurs during the year that corresponds with the peak years. The highest death-rate from small-pox was registered during the year in the districts of Monghyr (0·7), Palamau (0·5) and Shahabad (0·4) while the districts of Singhbhum (0·02), Hazaribagh (0.03) and Purnea (0·09) returned the lowest death-rates. Amongst the towns Revelganj, Monghyr and Roserah reported highest death-rates, viz., 3·9, 2·8 and 2·4 respectively.

Primary vaccination is compulsory under the Bengal Vaccination Act in Muzaffarpur, Patna, Gaya, Bhagalpur, Saran, Champaran, Darbhanga, Purnea, Hazaribagh and Shahabad. All these districts except Hazaribagh maintain health organisation under district health officers. With the enforcement of the provisions made under sections 92 to 96 of the Local Self-Government Act, the responsibility of the administration of Act has been transferred to such local bodies as have taken up health organisation schemes and the health officers of the district boards of Gaya, Shahabad, Saran, Muzaffarpur, Purnea, Darbhanga, Patna, Champaran, Bhagalpur and Manbhum have been appointed Superintendents of Vaccination. The inspection of vaccination is done by the district health staff in these districts and Government vaccination inspecting staff have been withdrawn. The Civil Surgeons function as the Superintendents of Vaccination in places where the local bodies have no health officers and Government exercise control over the administration of vaccination through the Assistant Directors of Public Health who make annual inspection tours and submit special reports on this work. The three special inspectors of vaccination that were appointed by Government a few years ago to ensure better supervision of the vaccination work continued to function during the year, one under each of the Assistant Directors of Public Health. Their services were specially utilised to render assistance to the local bodies in the vaccination administration in accordance with the provisions of the Vaccination Act in the compulsory areas. They were also sent to most of the areas where small-pox broke out in epidemic form to induce the people to accept vaccination operations. A great deal still remains to be done before it can be hoped to make vaccination universally acceptable. It is expected that all the district boards of the province will soon take over direct control of this very important public health measure and provide facilities for vaccination and re-vaccination of the entire population.

The vaccine lymph manufactured at the Vaccine Depot is supplied throughout the province free of cost. The lymph before being issued is thoroughly tested with regard to its potency and purity. The lymph produced is considered to be of high standard. This is borne out by the high percentage of successes obtained with its use in primary vaccination which has invariably been found to be 98 to 99 per cent. 1,837,461 vaccination operations were performed in the province during the year under report. Out of these 1,017,374 were cases of primary and 8,20,087 were those of re-vaccination.

Although vaccination confers sure protection against small-pox infection and about 15 to 18 lakhs of persons get vaccinated every year, the province continues to register large number of deaths from this disease and the incidence tends to show sharp rises at times. This is due to the fact that a large number of the children born every year escape even primary vaccination and the need for re-vaccination is not yet fully appreciated by a large number of the general population. It is, therefore, considered that so long, not only primary vaccination, but also periodical re-vaccination of the whole population, is not made compulsory, it will not be possible to ensure complete disappearance of the incidence of this disease.

6. *Plague.*—There were 1,938 deaths from plague in the province during the year as compared with 1,838 in the previous year. The death-rate remained the same as in the last year. Plague was absent from North Monghyr and Purnea. Although incidence of plague has greatly declined, during the last decade in the province, there are still certain isolated foci in the districts of Champaran, Saran, Muzaffarpur, Darbhanga and North Monghyr where plague starts almost every year with the approach of the winter season, reaches its maximum intensity during February and March and declines with the advent of the summer months. The district of Saran with a total of 1,447 deaths recorded the highest death-rate (0·05) followed by Muzaffarpur (0·1) and Champaran (0·23). Bhagalpur with a total of 55 deaths recorded the death-rate of 0·02 and Shahabad with a total of 49 deaths recorded the death-rate of 0·02. In the district of Champaran plague was responsible for 59 deaths during the year and of these 15 deaths occurred in Bettiah town.

In the district of Saran the epidemic in January continued from the previous year. The disease continued throughout the year in epidemic form except in November. A total of 1,447 deaths were recorded from plague in the district as against 1,173 of the previous year and 27,211 persons received anti-plague inoculations.

In Muzaffarpur district plague as usual was confined to the endemic areas of the Hajipur subdivision and a portion of Sadr subdivision with a mortality rate of 0·1 as against 0·1 of the previous year. Anti-plague inoculations 7,188 in number as against 9,120 of the previous year were performed by the dispensary and the public health doctors of the district board.

In Bhagalpur 55 deaths were recorded during the year as against no death in the previous year. 7,289 persons were inoculated.

In Shahabad plague broke out in April and continued till May. The disease again occurred from September to December. Altogether 49 deaths were recorded in the district during the year and 1,393 anti-plague inoculations were carried out.

The incidence of the disease appears to have disappeared in the district of Monghyr. No death occurred from plague in this district during this as well as in the previous two years, although an endemic focus had existed in Begusarai subdivision where deaths had been occurring almost every year prior to this period.

7. *Dysentery and Diarrhœa.*—There were 4,141 deaths from this group of diseases as against 3,725 deaths in the preceding year and the mortality-rate was 0·1 as against the same in the previous year. The towns which recorded highest death-rates were Sitamarhi (1·0), Purnea (1·6), Revelganj (1·4) and Jamalpur (1·2). The highest number of deaths occur from these diseases usually during the monsoon months, whilst the lowest is recorded during the driest part of the year. This fact demonstrates that the incidence of these diseases as well as of other bowel diseases are closely associated with the nature of conservancy service and the state of water-supply.

CHAPTER V.

Fairs and Festivals.

A number of melas are held every year in the different parts of the province where large number of people, usually exceeding 50,000 assemble. Besides these there are innumerable melas of local interest which are held throughout the year and are attended by the inhabitants of the districts in which they are held and those of the adjoining ones.

Three melas, namely the Pitripaksha Mela held at Gaya, Harihar-Chhatra at Sonepur and Bhadra-Purnima at Deoghar have more than local interest and attract a large number of visitors from the other provinces of India. These melas have mostly a religious significance. The collection of such a large number of people in fairs and melas have been frequently responsible in the past for the outbreak and spread of cholera in the province. But with the growth of public health organisation in the districts and the provision of adequate sanitary arrangements, the risk of cholera breaking out at these congregations has been much reduced during recent years. Protected water-supply and arrangements for the quick removal of refuse and filth have been important factors in controlling and checking the outbreak of cholera at the melas.

The Sonepur mela which is considered to be the largest cattle fair in the world was held during the year from the 22nd November 1939 to the 6th December 1939 and the principal bathing day fell on the 26th November 1939. About three lakhs of people visited the fair on the principal bathing day and an average of about one lakh camped in the mela area during the whole mela period. 37,780 animals were brought for sale in the mela area; of these there were 700 elephants, 3,282 horses, 28,836 cattle, besides camels, goats and birds.

The mela area, as in the previous years, was divided into three sections—one doctor with suitable staff of sweepers, *doms*, road-cleaners, sanitary jamadars and a health inspector was placed on duty in each section. A doctor was also placed on epidemic duty at Palehzaghat and one on general epidemic duty in the fair. The Health Officer, district board, Saran, was on duty for the entire mela period and the Assistant Director of Public Health, North Bihar Circle, camped in the mela area from the 22nd November 1939 to the 3rd December 1939.

Sixty-four sets of trench latrines with accommodation for 320 seats were provided in the mela area. Over and above these, two sets of septic tank latrines with four and ten seats, respectively, were made available for public use. As in past years a very large number of visitors again preferred to ease themselves in the open fields to the trench latrines provided for them. Special squads of sweepers under sanitary jamadars were employed to move about in the mela area and the *diara* with spades and baskets to pick up night-soil and to remove and trench it. With a view to augment the latrine arrangements in the mela area and at the ghats it was recommended to the district board and the Railway authorities to have a sufficient number of bored-hole latrines which could be closed up after the mela was over. A few bored-hole latrines were made at the personal supervision of the District Engineer, Saran, and some by the Railway authorities at Palehzaghat. All these proved very useful. It is expected that arrangements will be made to provide sufficient number of bored-hole latrines for the next year's mela. An ambulance *doli* with bearers was posted at the dispensary of each section to carry the infectious cases to the Isolation Hospital. Two cases of cholera occurred during the whole mela period. Members of the various voluntary organisations, viz., Sewa Samiti, the Boys Scout, the St. John Ambulance as well as the police constables on patrol duty were requested to inform the health staff working in the area immediately of the occurrence of any case

of epidemic diseases. A Red Cross Hospital Van was posted at the Sonepur Railway platform and arrangement was also made by the railway for the inspection of all the incoming and outgoing pilgrims.

Two hundred and forty-nine prostitutes camped in the mela area this year as against 230 in the previous year. The question of prohibiting the prostitutes from camping in the mela area is under consideration.

A Medical Officer of Health was specially deputed to carry out public health propaganda in the mela area. He worked in collaboration with the organiser of the Rural Development Department and delivered lectures on important public health subjects such as control of cholera, small-pox, typhoid, dysentery, conservancy arrangement in the rural areas, rat control in relation to the outbreak of plague, balanced diet and suitable exercise in relation to personal health.

Health films were also shown on Maternity and Child Welfare and Fly Danger. Illustrated posters were hung up at prominent places in the *Nakhas* and a large number of leaflets and pamphlets on public health subjects in local vernaculars were distributed among the visitors. Magic lantern lectures were also given.

The Pitripaksh mela at Gaya commenced this year from the 28th September 1939 and lasted till the 12th October 1939. About 73,488 pilgrims visited Gaya during the mela as against 78 025 in the previous year. 154 lodging houses were licensed during the year as against 205 of the previous year under the Places of Pilgrimage Act. Most of the pilgrims were lodged in licensed houses and Dharamshalas. These were regularly inspected and attended to by the conservancy staff. The sacred tanks, seven in number, were cleaned. The *pindas* that were thrown about in and around the tanks were picked up as far as possible and removed. The whole of the mela area, excluding the railway station was divided into four sanitary units with one sub-assistant surgeon and a suitable conservancy staff in each unit. Four medical centres were started in the town for providing medical and surgical relief to the pilgrims. All these centres were provided with medicines and the necessary equipments for treatment of minor ailments among the pilgrims. The piped water supply was maintained for 18 hours a day for the whole mela period and chlorination of the water was carried out continuously. On an average 75,000 gallons of water were supplied per hour. All the wells in the mela area were not disinfected by the municipal staff. The water reservoir at the Railway station was daily phaged. Two cases of cholera were sent to the hospital from the Railway station on the 28th September and 5th October 1939. They came from Rewa State and Gorakhpur district, respectively. Both proved fatal.

The Bhadra Purnima mela was held at Deoghar from 26th September 1939 to the 2nd October 1939. 82 Lodging houses, including the temporary ones, were licensed under the Places of Pilgrimage Act providing accommodation for about 3,000 pilgrims. Adequate sanitary arrangements were made throughout the mela period under the supervision of the Health Officer, Deoghar Municipality. He was assisted by three medical officers deputed by the District Road Committee and the one Government epidemic doctor. The East Indian Railway deputed one doctor and one sanitary inspector at Jassidih and Deoghar Railway stations. 15 trench latrines were put up in addition to the permanent latrines and drinking water was distributed through overhead reservoir and pipe lines in the camping grounds. All the sources of water-supply of the town were previously disinfected with bleaching powder. During the mela all the important wells were treated with choleraphage. The town had several cases of cholera up to the beginning of September but remained free during the mela period. One case of cholera brought from the interior (Jagdiha) was treated in the Isolation Hospital. The patient recovered. As in the previous year the Health Officer, district board, Bhagalpur and the Civil Surgeon, Dumka exercised

strict vigilance over the pilgrims routes' to detect cases of cholera amongst the pilgrims and to take prompt preventive measures before they entered Deoghar. Inspection posts along the routes to Deoghar were put up.

Besides these a great many other fairs are also held in the province. In the districts, having health organisation, adequate sanitary arrangements were made on these occasions by the local bodies under the direct supervision of the health officers. All the important melas were visited by the Assistant Directors of Public Health who helped the local bodies in organising the sanitary arrangements. Government epidemic doctors were detailed by the Public Health Department to places where their services were considered necessary.

CHAPTER VI.

URBAN SANITATION.

Twenty-five *out* of 53 municipalities were inspected by the Assistant Directors of Public Health during the year under review and reports on their inspections were duly submitted to Government. Stress was laid in all the reports on the provision of wholesome water-supply, efficient removal and disposal of refuse and night-soil, suppression of nuisances, improved hygiene and better control of food supplies. The majority of the municipalities continued to show inability to employ suitable qualified health officers on account of financial stringency and so long as their financial position does not improve, any proposal of employment of health officers by them appears to remain a remote possibility. The municipalities of Patna, Gaya, Ranchi, Bhagalpur, Darbhanga, Muzaffarpur, Monghyr and Deoghar continued to maintain full time Health Officers during the year. The health officers of Patna, Gaya and Ranchi municipalities belonged to the Provincial Public Health Cadre and are paid by Government, while those employed by Bhagalpur, Darbhanga, Muzaffarpur, Monghyr and Deoghar municipalities are paid by the local bodies concerned. The rules framed by Government laying conditions for the recruitment of health officers by municipalities have been so amended as to provide smaller municipalities having less than 50,000 population with the option to employ health officers with L. P. H. qualification. This amendment enabled the municipality of Deoghar to appoint a health officer with this qualification on smaller pay. It is hoped that other municipalities of the province, e. g., Bihar, Bettiah and Siwan will also take advantage of the position and appoint their own health officers.

The necessity of appointing suitable qualified health officers in larger municipalities such as Chapra, Arrah, Purnea and Hazaribagh has long been felt and has been stressed for a number of years in the Public Health reports. The question of maintenance of health officers under the local bodies is very important and it should be made compulsory for these local bodies to maintain health officers for making satisfactory progress in the health administration of the municipalities. Sanitary inspectors by reason of their limited training are not considered to be qualified enough to carry out efficiently all the duties of a health officer.

Compulsory primary vaccination under the Bengal Vaccination Act is in force in all the municipal towns of the province and the Civil Surgeons have to act as Superintendents of Vaccination except in the municipalities which have health officers, where these officers have been appointed Superintendents under section 268 of the Bihar and Orissa Municipal Act, 1922.

Most of the recommendations made by the Assistant Directors of Public Health involving minor expenditure were as usual given effect to by the municipalities at their own cost. The recommendations with regard to bigger schemes and major public health projects, e.g., the provision of

protected water-supply, improved drainage, construction of sanitary markets, opening up of congested areas, etc., have to wait because of the stringency of finances from which the municipalities in general chronically suffer.

Some municipalities have raised their standard of cleanliness. Several towns, however, are dirty because of the rate-payers' carelessness and indifference and because of the negligence of the municipal staff. Bad drainage is responsible for the unhygienic conditions of many towns. Defective and inadequate water-supply and conservancy arrangements are responsible for many diseases. It is to be regretted that in most of the towns the Vaccination Act, Notifiable Diseases Act, etc., are not being strictly enforced. The enforcement of the Food Adulteration Act has not brought about any marked change in the mentality of the manufacturers and dealers and the sale of adulterated food-stuffs continued. To effect tangible improvements in the town, it would be necessary to improve the financial conditions of the municipalities, to educate the people in health matters and to rigidly enforce the municipal laws.

2. *Expenditure on Sanitation in municipal towns.*—The statement below shows the receipt and expenditure for sanitary purposes during the year 1938-39 as compared with those of the previous year :—

Number of municipalities.	Total receipt including opening balance.		Heads of expenditure.	1937-38.	1938-39.	Percentage of expenditure to the total receipts.	
	1937-38.	1938-39.				1937-38.	1938-39.
1	2	3	4	5	6	7	8
	Rs.	Rs.		Rs.	Rs.		
53	61,70,950	51,20,627	Conservancy ...	10,74,071	10,10,534	17·4	19·7
			Drainage ...	2,85,048	1,72,139	4·6	3·3
			Water-supply ...	3,98,295	3,65,980	6·4	7·1
			Vaccination ...	14,337	13,520	0·2	0·2
			Epidemics ...	10,981	15,950	0·2	0·3
			Markets and fairs ...	37,217	39,081	0·6	0·7
			Other sanitary charges	16,615	17,402	0·3	0·3
			Public health staff ...	67,634	68,343	1·1	1·3
			Total ...	19,04,198	17,02,949	30·8	33·2
			*Contagious Diseases Hospitals	2,78,638	3,80,754		

*This represents cholera hospitals and leper asylums, etc. An expenditure of Rs. 3,80,754 has been incurred in 1938-39. The expenditure is mainly met from Government grants.

3. *Chief sanitary works in municipal towns.*—The details of expenditure under this head are dealt with in the report of the Special Officer, Public Health Engineering Department, Bihar.

CHAPTER VII.

RURAL SANITATION.

The health organisation scheme continued to function in 10 out of the 16 districts of the province, namely Patna, Gaya, Shahabad, Muzaffarpur, Saran, Champaran, Darbhanga, Bhagalpur, Purnea and Manbhum during the year. Primary aim of the organisation is to prevent occurrences of epidemic diseases and disseminate knowledge of elementary hygiene and sanitation among the rural masses. A complete health organisation scheme as was

recommended by Government for adoption by the district boards consisted of a fully qualified health officer stationed at the district headquarters and an assistant health officer preferably with L. P. H. qualification stationed at each subdivisional headquarters and a trained health inspector with headquarters at each police-station with a suitable number of such other staff as sanitary jamadars, disinfectors, vaccinators and sweepers. Every district, where this organisation scheme has been introduced, maintains a qualified health officer but the subordinate health staff vary in accordance with the respective financial position and the budget allotments of the different boards for expenditure on health and sanitation. Some of these boards have assistant health officers of L. M. P. qualification who are posted at the subdivisional headquarters. All the districts where the health organisation scheme functions have been divided into different circles, consisting mostly of two or three thanas. Each of these circles is put in charge of a trained health inspector. The health officers of the districts of Gaya, Muzaffarpur, Saran, Bhagalpur, Darbhanga, Champaran and Shahabad belong to the Public Health Cadre of the province and they draw their salary from the provincial budget, while the health officers of the district boards of Patna, Purnea and Manbhum are appointed by the boards and draw their salary from the board's funds. Patna and Muzaffarpur district boards received an annual contribution of Rs. 10,000 from Government for their health organisation schemes while the Manbhum district board received an annual grant of Rs. 6,000 towards the cost of maintenance of their health officer. Formerly the Civil Surgeons were entirely responsible for the control of vaccination administration as Superintendents of Vaccination and Government employed the inspecting staff (inspectors and sub-inspectors of vaccinations) to check the work of vaccinators. With the introduction of the health organisation schemes it became possible to transfer the responsibility of vaccination administration to the district boards. Health officers of these district boards have been appointed Superintendents of Vaccination and the Government Vaccination inspecting staff have been withdrawn from such districts. It has also been possible to put into operation successfully various kala-azar and malaria centres in connection with the kala-azar and anti-malarial schemes under the health officers of the districts of Purnea, Muzaffarpur, Darbhanga and Bhagalpur.

The Bengal Vaccination Act continued to remain in force in rural areas of the districts of Patna, Gaya, Shahabad, Muzaffarpur, Champaran, Saran, Darbhanga, Purnea, Bhagalpur, Hazaribagh and Manbhum. Vaccination is not compulsory in the rural areas of the remaining five districts for want of health organisation scheme in them.

The problem of rural health deserves special consideration. As much as 96 per cent of the total population of the province lie in rural areas. In most villages elementary sanitary requirements such as safe water-supply, satisfactory disposal of night-soil or even passable approach road to the villages remain mostly unprovided and by far the majority of the annual toll of deaths continues to occur from preventable diseases. It is essential therefore that a suitable and proper health organisation should deserve consideration in any scheme of rural development for the province.

It is necessary for every district board to have a health organisation scheme. The first essential of the scheme is the appointment of a fully qualified health efficer. Government recognise the necessity of such health officers for the remaining six districts and have provided for one health officer for the district of Santal Parganas. It is hoped that the districts of Monghyr, Hazaribagh and Singhbhum will have their health officers in the near future.

In addition to a health officer, trained health inspectors, midwives, sanitary jamadars, disinfectors, vaccinators and sweepers are necessary for the effective control of epidemics, improvement of sanitation and health education in the groups of villages in every thana. The district boards which have not adopted the health organisation scheme, however, maintain at present a certain number of subordinate health staff which is increased temporarily during the time of epidemics. Whenever the epidemics assume serious

proportions, the boards requisition for Government epidemic doctors. This means delay and the districts which have no health officers are naturally handicapped in organising timely adequate measures to control epidemics.

2. *Expenditure on sanitation by district boards.*—The following statement shows the receipt and expenditure of district boards under the principal headings of sanitation :—

Number of district boards.	Total receipt including opening balance.		Heads of expenditure.	1937-38.	1938-39.	Percentage of expenditure to the total receipts.	
	1937-38.	1938-39.				1937-38.	1938-39.
1	2	3	4	5	6	7	8
	Rs.	Rs.		Rs.	Rs.		
16	1,82,25,131	1,50,65,688	Conservancy ...	2,58,027	2,36,588	1·4	1·5
			Drainage ...	32,074	11,170	0·2	0·07
			Water-supply ...	2,18,827	1,34,175	1·2	0·7
			Vaccination	14,205	14,841	0·08	0·09
			Epidemics ...	1,01,870	77,304	0·5	0·5
			Markets and fairs ...	18,405	12,118	0·1	0·08
			Total ...	6,43,408	4,76,196	3·5	3·1

CHAPTER VIII.

MALARIA AND KALA-AZAR.

1. *Malaria.*—Out of a total number of 744,765 deaths registered in the province during the year, the group of diseases included under "Fevers" was responsible for 601,893 deaths or 80·8 per cent of the total deaths as against 615,966 deaths or 80·6 per cent of deaths in the previous year. It is, therefore, quite apparent that fever undoubtedly remains the principal cause of mortality in the province. Although a large number of deaths from other diseases in which fever is a prominent symptom are included under this group, it is strongly believed that a large proportion of them is caused by malaria.

The severe epidemic of malaria, witnessed during 1937, in certain parts of North Bihar particularly in the districts of Muzaffarpur, Darbhanga, Bhagalpur and Purnea, occurred again during 1938 with equal severity. Malaria was less severe in 1939. The epidemic areas of Champaran district experienced a recurrence of the endemic of the previous year, whilst certain portion of North Monghyr also suffered from minor outbreak. The district of Manbhum recorded less incidence. The province recorded during 1939 a death-rate of 18·6 from fevers as against 19·0 in 1938. The higher incidence of malaria during the year is apparently reflected in the increased fever death-rate. The highest rates for the year were recorded in the districts of Palamau (23·8), Purnea (23·6), Gaya (22·2), Muzaffarpur (20·8), Hazaribagh (20·4) and Bhagalpur (20·2).

Sporadic cases of malaria occur in every district of the province almost throughout the year. A total of 1,495,052 cases of malaria was treated in the hospitals and the dispensaries of the province during the year and of these the highest number of cases (275,708) was treated in the district of Purnea whilst the least number (33,362) came for treatment in the district of Shahabad. So malaria more or less of static character may be stated to be prevalent throughout the province, the intensity depending upon the local topographical conditions and variations in the epidemiological factors of the

disease from year to year. The tracts which show special proneness to the prevalence of the disease in epidemic form are (1) a narrow long belt in North Bihar contiguous to Nepal, (2) the endemic areas of Champaran and Purnea, (3) the group of villages on the outskirt of the Chota Nagpur plateau in the neighbourhood of the hills and the river ghats in Gaya district and (4) scattered patches in the districts of Ranchi, Hazaribagh, Palamau, Singhbhum and Manbhum adjacent to the range of the hills in the Chota Nagpur plateau.

A brief description of the outbreak in each district where the disease assumed epidemic proportions during the year is given below :—

Muzaffarpur.—In 1939 the incidence of malaria was slightly less severe than reported in the previous year. All the six anti-malarial units started in 1938, viz., at Majorganj, Parsauni, Rampurhari, Berua and Pateypur continued to function during the year under report. Intensive anti-malarial and anti-mosquito measures were carried out at all these units with very encouraging results. Besides these units one malaria centre functioned throughout the year at Narma where only curative measures were carried out.

The activity of the unit at Majorganj covered the notorious Manusmara area. As a result of the anti-malarial measures carried out in this area, the villages in this area definitely showed marked improvement in the health conditions of the villagers and the incidence of the disease has been reduced to corresponding degree.

Besides 163,840 patients treated at the permanent hospitals and dispensaries of the district, 133,113 persons were treated at the temporary centres organized by Government and the district health staff. A total of 717 lbs. of quinine was supplied free by Government and two Government epidemic doctors were detailed during the year. Government gave a grant of Rs. 13,008 for anti-malarial and anti-mosquito measures.

With a view to popularise indigenous systems of treatment still further, Government sanctioned the continuance of the Tibbi centre at Maulanagar and the Ayurvedic centres at Panapur and Sewaipatti and provided funds for starting one new Tibbi centre at Shabpur Mircha and one Ayurvedic centre each at Sain, Piroi and Tisiouta, which began to function from December 1939. Prior to the opening of these Tibbi and Ayurvedic centres, the villages along the banks of the river Baya from Jaitpur to Jandaha, where the incidence of malaria was high last year, were regularly visited by the district health staff for distribution of quinine.

Bhagalpur.—The epidemic of malaria was reported from several areas under Supaul and Madhipura subdivisions. The temporary malaria treatment centres working in the district during 1938-39 were closed by the end of March except those at Jagatpur and Chandrain; anti-mosquito work was also carried out at these places. Two treatment centres, viz., one at Maheshi in Bangaon police-station and the other at Bhaptiahi in Supaul police-station were started in August and a third centre at Phulout in December. Five subsidised dispensaries were started by the district board in the malaria affected areas. Anti-mosquito work was undertaken in 30 villages in Jagatpur and Chandrain areas. A total of 244,393 persons were treated for malaria in North Bhagalpur. Government made a grant of Rs. 11,580 for anti-malarial measures and 760 lbs. of quinine were supplied free from Government stock.

Purnea.—The epidemic was not so severe as in 1938 in the beginning of the monsoon. It broke out in the month of September. 11 thanas were affected in Sadr subdivision. The epidemic was severe in the Raniganj thana of Araria subdivision and almost all the thanas of Kishanganj subdivision were affected. 18 malarial centres were opened from time to time. The board employed 15 doctors to combat the epidemic and three Government epidemic doctors were detailed. A total of 61,104 cases of malaria were treated at the centres. 201 lbs. of quinine were supplied free by Government. Government gave a grant of Rs. 10,081 for anti-malarial measures in the district during the year.

Darbhanga.—Fifty-five temporary anti-malarial centres were opened for distribution of quinine during the year. A total of 205,492 patients received treatment. Anti-mosquito measures were also carried out in selected malaria affected villages along the river Noon and the dead courses of the Kamla, the Bagmati and the Baiti. This measure has definitely reduced the incidence of malaria in affected villages and it is necessary that the measure should be continued. Four Government epidemic doctors were detailed and 585 lbs. of quinine were supplied free by Government. Government gave a grant of Rs. 3,048 for anti-malaria and anti-mosquito measures in the district.

Champaran.—Malaria was endemic in some parts of the district. The epidemic was severe in Ramnagar and Shikarpur.

Anti-malaria and anti-mosquito measures started from the 7th September 1939 with Shikarpur as its centre and sub-centres at—

(1) Narkatiaganj, (2) Rajapur, (3) Khiria, (4) Bhasurari, (5) Samastipur and (6) Satwariya.

The staff employed cleared weeds from the surface of 1,510,803 square yards of water and kerosenised the same as against 237,754 of last year.

Three thousand nine hundred and eight malaria patients were treated as against 2,381 of last year.

A Government grant of Rs. 1,82[illegible] was made and 30 lbs. of quinine were supplied free by Government.

Monghyr.—Malaria was noticed in an epidemic form in North Monghyr. Government gave a grant of Rs. 2,243 for anti-malarial measures and 80 lbs. of quinine were supplied free. One doctor was deputed from the Public Health Department for anti-malarial work.

Manbhum.—Ten anti-malarial centres were opened for about six months for carrying out intensive treatment. Anti-mosquito measures were also undertaken in three centres, viz., at Baghmundi, Kueni and Topchanchi. Government gave a grant of Rs. 1,258 for the measures.

Ranchi.—Three anti-malarial centres were opened, viz., one at Kolebira in Simdega subdivision, another at Palkot in Gumla subdivision and the third at Kuru in Sadr subdivision. Anti-mosquito measures were also carried out with encouraging results and an appreciable decrease in the incidence of malaria in the villages under operation was noticed. Government gave a grant of Rs. 2,031 and supplied free 16 lbs. of quinine for the purpose.

Hazaribagh.—Anti-malarial work was started at Ramgarh, Nayatoli, Patratu and Morum Khud under Ramgarh police-station. Large tanks and water-logged areas were de-weeded and cleaned. A grant of Rs. 915 was made by Government and 17 lbs. of quinine were supplied free.

2. *Sale of quinine.*—Sale of quinine treatments was continued at the various post offices in the province. These treatments were as usual supplied to the post offices by the Civil Surgeons who obtained their requirements from the Presidency Jail at Calcutta. Each treatment consisted of twenty tablets of four grains each and each tube containing twenty tablets was sold at five annas and three pies.

378.1 pounds of quinine sulphate in tablet form were sold during the year under review as against 352·7 pounds in the previous year. The largest quantities were taken by the districts of Purnea, Bhagalpur, Ranchi and Manbhum.

3. *Spleen census.*—The Assistant Director of Public Health, Chota Nagpur Circle, carried out spleen census during his vaccination tours in the districts of Ranchi, Singhbhum and Hazaribagh. He examined spleen of 2,428 children who came from 98 villages and of these 560 children showed enlargement of spleen. This showed a spleenic index of 0·20 for the total number of children examined, but when calculated for the district figures, the index came to 20·26, 35·77 and 22·82 for the districts of Ranchi, Singhbhum and Hazaribagh, respectively.

Kala-azar.—Five kala-azar centres were opened by Government in February and 15 additional centres in October in North Bihar. Of these eight centres were located in the district of Purnea and four each in Muzaffarpur, Darbhanga and Bhagalpur which are continuing. Two sub-centres were attached to each centre and the medical officers of health visited these sub-centres on two fixed days of the week and gave injections. These centres have gained much popularity. One special kala-azar relief centre at Jori in the district of Hazaribagh also functioned during the year.

A total of 2,456 kala-azar cases were treated in Muzaffarpur, 1,563 in Darbhanga, 4,029 in Bhagalpur and 3,800 in Purnea.

7,000 grams. of kala-azar drugs were supplied free by Government.

CHAPTER IX.

MATERNITY AND CHILD WELFARE.

The Maternity and Child Welfare Society which was constituted in August 1928 continued to function during the year with the help of a Managing Committee. The Managing Committee consists of a President—the wife of the Governor, two ex-officio members—the Inspector-General of Civil Hospitals, and the Director of Public Health, two members nominated by the Governor and four members co-opted by the other members for a period of two years at a time.

Lady Hallett was the president of the Committee up to the 5th August 1939, when Lady Stewart took over the presidentship. The Inspector-General of Civil Hospitals was the Honorary Secretary, the Accountant-General, the Honorary Treasurer and Military Secretary to His Excellency the Governor, the Joint Honorary Secretary throughout the year. There were thirteen centres working in the province. Of these eight worked under the auspices of the Society, viz., three in Patna, one each in Monghyr, Muzaffarpur, Purnea, Ranchi and Jugsalai. Five centres, viz., one in Chapra, three in Jharia and one in Padma (Hazaribagh) worked independently.

The year opened with a balance of Rs. 3,769 and closed with Rs. 5,061-14-2. The Society administers three trust funds, viz. (1) Lady Stephenson Child Welfare Trust Fund, (2) Lady Sifton Child Welfare Trust Fund, Patna and (3) Lady Sifton Child Welfare Trust Fund, Monghyr. A fund is also being collected for Ranchi but no trust deed has yet been executed. The working of the various centres was carried on by working committees formed locally. The work of all these centres being chiefly of an educational nature, including free domicilliary midwifery and free post and ante-natal treatments. Minor ailments are also attended to. Cases requiring hospital treatment are referred to the nearest hospital, ante-natal cases infants and toddlers are regularly visited by the Lady health visitors in their homes and simple labour cases are attended to. Informal talks on hygiene are given to the mothers. Babies are given baths, milk, sago, etc. and are supplied with warm clothes and kurtas.

The Government Maternity Supervisor, Patna attended each centre once a week. Instructions in knitting and sewing were given in all the centres. Drills and out-door games were held regularly. Talks on mother craft and hygiene were also given. Nursing tubercular mothers were supplied with milk and medicines by a grant from the Provincial Red Cross Fund. The vaccinator vaccinated the children against small-pox in the centres. A literacy centre has also been started in the Lady Wheeler centre at Gulzarbagh.

The Society as usual made contributions to the various centres which also received financial help in the shape of subsidies from the local bodies concerned.

The Government Maternity Supervisor and her seven midwives continued to do good work in the town of Patna. The supervisor personally delivered nine cases in their houses and took 619 cases to the Patna Medical College Hospital for confinement. The midwives delivered 1,017 cases at the patients' homes and took 330 cases to the Patna Medical College Hospital. The municipalities of Ranchi, Darbh[illegible] and the Patna

Administration Committee also continued to maintain a midwifery service for their respective areas. One midwife was employed by each of these municipalities. Information received from the Chairman of the local bodies and the Civil Surgeons show that 24 maternity and child welfare centres functioned during the year 1939 in the province and of these 21 were located in the urban areas whilst three were situated in the rural areas. Over and above these, the industrial areas under the Jharia Mines Board of Health and Tata Iron and Steel Company maintained their own maternity and child welfare organizations. The maternity ward of the Tata hospital at Jamshedpur remained also open throughout the year and the lady doctor employed there continued to conduct labour cases free of charge at the houses in the local areas.

No means exist at present to ascertain the maternal mortality-rate either for the urban or the rural areas, but the infant mortality-rate for province during the year was 113·9 in the urban and 133·2 in the rural areas while the death-rate for the children under five years of age was 37·3 for the males and 32·7 for the females. No special method was employed during the year to ascertain the infant death-rate. The village chaukidars, as usual, reported the deaths mentioning the cause of the death as stated by the parents and guardians to the thana officers through *hathchittas*. The thana officers in turn reported these to the Civil Surgeons who tabulated the figures for the whole district and sent a weekly report to the Director of Public Health.

The work of the centre is chiefly of educational nature. Minor ailments are attended to and those requiring hospital treatment are referred to the local hospital. Ante-natal cases, infants and toddlers are regularly visited in their own homes and simple labour cases were attended to in the homes of patients. Abnormal cases are sent to hospital. Informal talks on hygiene are given to mothers attending the centre.

All infants and toddlers brought to the centres are washed as circumstances permit, supplied with milk, cod liver oil, barley water, warm *kurtas*, etc. They are weighed regularly and their general physique and development watched. The tubercular babies and mothers are supplied with milk and medicines. *Dais* both indigenous and others are also trained at the centres.

Every centre is in charge of a Lady Health Visitor assisted by a midwife. It is also regularly visited by the local lady doctor and in the case of the Patna centres by the Government Maternity Supervisor.

The municipal commissioners have framed bye-laws under section 14(1) of the Bihar and Orissa Nurses' Registration Act, 1935, to restrict the practice of unqualified *dais*. They have moved the local Government to confirm and publish the bye-laws with the proviso that the bye-laws may come into force on the 1st January 1941, and that if the municipal commissioners consider on the 1st January 1941 that the number of trained *dais* is not sufficient they will have the right to extend the said date. Classes for the training of indigenous *dais* continued to be held during the year in accordance with the Victoria Memorial Fund syllabus in most of the Sadr and sub-divisional hospitals.

CHAPTER X.

SCHOOL HYGIENE AND MEDICAL INSPECTION OF SCHOOL CHILDREN.

1. The Government maintain a special staff of officers for the medical examination of scholars of the high English schools since 1920. This system was subsequently extended to the middle English schools at places where there is also a high English school.

There is one school medical officer of assistant surgeon grade and one assistant school medical officer of sub-assistant surgeon class in each of the four divisions of the province. These officers visit all the high schools and most of the middle English schools in their respective divisions. Besides these some of the medical officers of health of the district boards, where such officers exist, also carry out medical examination of the students of the middle schools which are situated at places where there is no high school.

2. *Medical examination of scholars.*—Usually all the new scholars admitted to the schools since the previous visit of the school medical officers are thoroughly examined and a complete medical history of each new entrant is recorded on a prescribed form. All scholars found to be suffering from physical defects at a previous inspection are re-examined and a further note on the defects is recorded. At the end of the inspection, parents or guardians of boys found to be suffering from physical defects are informed of the particular defects the boys are suffering from and they are recommended to consult their medical attendants or to take the boys for treatment to the nearest hospital or dispensary. The medical officers of the dispensaries or hospitals are required to note on the counterfoils of the forms the treatment the boys have received and the results.

During the medical inspection of girls' schools in the year under review 1,619 girl students were examined. 79·92 per cent were found to be suffering from various form of ailments such as mal-nutrition, defective vision, granular lids, caries teeth, enlarged tonsils, anæmia, bronchitis, ring-worm, enlarged spleen, etc., and were recommended for medical advice and treatment. The total number of girls who have been benefited by medical treatment and have been found free from the diseases on next examination during the year was 802. A large proportion of diseases and unsatisfactory condition prevalent among the girl students appear to be generally due to carelessness, deficient or improper food and insanitary conditions of living.

The following is a statement showing the number of children examined by each of the school medical officers and the number recommended for treatment in 1939 :—

Divisions.	Number of children examined.	Number of children recommended for treatment.	Number of children recommended for treatment found on re-examination to have actually received treatment	Number of children found to have been benefited from treatment.
1	2	3	4	5
Patna	3,534	1,343	576	255
Tirhut	3,697	1,245	317	214
Bhagalpur	3,332	1,642	1,432	193
Chota Nagpur	2,448	1,019	481	240

From the statement noted above it would appear that out of 13,011 boys examined during the year 5,249 or 40·3 per cent suffered from some kind of ailments or other. The number of children suffering from various conditions is noted as below :—

	Number of children found suffering from—	Percentage of children found to be suffering from—
1. Poor nutrition	1,734	13·3
2. Errors of refraction	1,331	10·2
3. Eye disease such as tracoma, conjunctivitis, blephritis and corneal opacity.	52	0·4
4. Pyrrhœa and caries teeth	813	6·2
5. Enlarged tonsils	1,755	13·4
6. Adenoids	115	0·8
7. Enlarged glands in the neck	328	2·5
8. Functional heart troubles	119	0·8

Over and above these, 14 children suffered from the organic disease of the heart, six from pulmonary tuberculosis whilst 91 showed enlargement of spleen and 213 were found to be unvaccinated. During the same period the various health officers employed by the district boards examined 6,751 children and of them 1,252 were found to be suffering from different diseases. Majority of them were found as usual to be suffering from poor nutrition, caries teeth, enlarged tonsils and errors of refraction.

3. *Lectures in hygiene.*—The school medical officers also delivered lectures on hygiene, sanitation and epidemic diseases common in India to the students of the X and XI classes of the high schools. 1,774 lectures were delivered during the year and of these 200 lectures were illustrated with magic lantern slides. Attendance at ten such lectures is compulsory for every boy before he is allowed to sit for the Matriculation examination, but as hygiene is not included in the syllabus for the Matriculation examination, the lectures do not receive quite the attention they deserve. A good deal of useful information about Public Health subjects is, however, imparted through these lectures and they are expected to awaken an interest in the minds of the boys for healthy habits and prevention of diseases. During the summer vacation, these officers devoted themselves as in previous years to special propaganda work by arranging lectures and demonstrations for the village Gurus, Maulavis and sub-inspectors of schools in different selected centres.

The school and hostel buildings are regularly inspected by the school medical officers during their visit to each school. 217 such school premises were inspected during the year. These inspections have definitely helped in recent years in effecting improvement in the standard of general sanitation of these premises. Provision for sanitary conveniences has much improved and a satisfactory arrangement now exists in most of these schools for drinking water-supply.

The school medical officers during their inspection of each school also look into the arrangements made for physical exercises, games and suitable sitting accommodations in the class rooms and by their constant advice they try to impress upon the headmasters, guardians and parents that in their zeal to impart mental education, the physical development of the child should not be neglected.

The scheme for providing midday school lunch based on a fee of annas eight per school child per month introduced in Purulia zila school in 1934, has now been taken up by quite a number of the high schools in the province. The system is reported to be working very satisfactorily.

CHAPTER XI.

Public Health Propaganda.

1. The Public Health Department maintains a Publicity Bureau with the object of educating the general public in elementary laws of hygiene and sanitation and in simple method of preventing epidemic diseases. The Publicity Bureau carried out educative propaganda with a view to create permanent interest in hygiene and to stimulate them to cultivate habits and to carry out measures which will help them to secure health and remain healthy. The Publicity Bureau continued to distribute leaflets and pamphlets in different vernaculars on health subjects in rural areas through the health staff of the districts. Pictorial health posters and charts were sent out to be exhibited at the fairs and festivals held in the various parts of the province.

The public are kept informed of the state of the health of the province and of the various activities of the department through the press.

A short bulletin summarising the main activities of the Bureau and the department is issued every month for publication through the Director of Publicity.

All the officers of the Public Health Department during the course of their tours also carried out health propaganda among the people. School medical officers delivered magic lantern lectures to the boys during their inspection of the schools. The Assistant Directors of Public Health, while touring in the rural areas, also gave talks to the villagers on the prevention of malaria, small-pox, cholera and on general sanitation.

Propaganda work on public health subjects were carried out by means of charts, posters, models, leaflets, pamphlets and magic lantern slides at the Dhanbad Exhibition in 1939 and Baunsi fair in the district of Bhagalpur in January 1939. A Government epidemic doctor was detailed to Dhanbad to organise a public health section in the exhibition held there, in co-operation with the Chief Medical Officer, Jharia Mines Board of Health. A first class certificate and a silver medal were awarded to the Jharia Mines Board of Health, Dhanbad, for the excellent health exhibition, by the Exhibition Committee.

One Government epidemic doctor was detailed to the Hijla mela, Dumka and another to Jamshedpur exhibition to carry out propaganda work on public health subjects by means of charts, posters, models, leaflets, pamphlets and magic lantern slides. The health officer, district board, Patna organised a health exhibition at the Agricultural Show, Bihta. Posters and leaflets were supplied to the Baby show held at Jamalpur.

The health officer, Patna City municipality, exhibited charts and posters and distributed leaflets among the visitors during the Ramnaumi Utsava at Mangles Tank, Patna City.

The health officer, district board, Gaya, carried out propaganda work on public health subjects during the All-India Kisan Sabha held at Gaya.

The school medical officer, Bhagalpur Division, carried out propaganda work on public health subjects during the Education Week held at Bhagalpur.

A health section was organised at the Brindaban Conference in Champaran district and propaganda work on public health subjects was carried out by the Public Health Department, Bihar.

The Officer-in-charge, Public Health Bureau, Bihar, delivered lectures in hygiene and public health subjects to the organisers and supervisors of the Sugarcane-Growers, Co-operative Societies in the province during their training in Patna.

The health officer, district board, Muzaffarpur, carried out propaganda work on public health subjects during the Bihar Co-operative Federation Congress held at Muzaffarpur. The Assistant Director of Public Health, North Bihar Circle, also delivered lectures illustrated with magic lantern slides on "Intensive rural hygiene on co-operative basis in Netherland East Indies".

A leaflet on water-hyacinth was prepared and published in Hindi and Urdu by the Officer-in-charge, Public Health Bureau, Bihar, and distributed in the province through the local bodies and others.

2. *Red Cross Society.*—The Red Cross Health Museum at the Patna Museum was open to visitors throughout the year 1939.

The Health Museum continued to attract a large number of visitors as before from all parts of the province. 131,135 persons, as against 153,855 in the previous year, visited the museum from the 1st January to the 31st December 1939. Of these 22,379 persons visited the museum on the 26th November 1939 on the occasion of the Sonepur fair as against 23,755 of the previous year. An officer of the Public Health Bureau visited the Health Museum on the Kartic Purnima day (26th November 1939) and distributed leaflets on public health subjects in English and Vernaculars among the visitors.

CHAPTER XII.

PUBLIC HEALTH ADMINISTRATION.

1. The statement below shows the receipts and expenditure under the head "39-Public Health (Medical)" for the years 1937-38 and 1938-39 :—

Head.	Receipts.		Head of expenditure.	1937-38.		1938-39.	
	1937-38.	1938-39.		Budget provision.	Expenditure.	Budget provision.	Expenditure.
1	2	3	4	5	6	7	8
	Rs.	Rs.		Rs.	Rs.	Rs.	Rs.
Sale-proceeds of Sera and Vaccine, etc.	35,268	35,000	Public Health Establishment.	1,79,938	1,60,463	1,62,604	1,54,435
			Medical examination of scholars and teaching of hygiene in high schools.	40,810	29,598	36,935	31,201
			Bubonic plague ...	7,000	8,806	7,000	5,621
			Malaria... ...	9,000	8,073	14,000	31,931
			Other epidemic disease	1,37,047	1,12,686	1,43,402	1,34,715
			Publicity campaign...	1,876	1,828	1,912	1,961
			Public Health Laboratories.	18,582	17,865	17,903	19,277
			Total ...	3,84,253	3,39,319	3,83,756	3,82,141

All requisitions of the Director of Public Health were met by the Government and funds were made available in most cases.

2. The three Assistant Directors of Public Health, one for South Bihar Circle, with headquarters at Patna, one for North Bihar Circle, with headquarters at Muzaffarpur, and one for Chota Nagpur Circle, with his headquarters at Namkum in the Ranchi district, continued to function as in previous years.

The Assistant Directors of Public Health are employed to investigate into the epidemics, suggest measures of control and to see that actions taken are adequate to combat the epidemics. They also supervise the prophylactic measures such a vaccination, anti-cholera and anti-plague inoculations. They inspect and report on all nuisances occurring in their areas. A systematic inspection of all local bodies, fairs and melas and high schools are included in their legitimate duties. They also carry out propaganda work by lectures and magic lantern demonstrations. Regular inspection of mines and factories in their respective circles have also been added to the routine duties of the Assistant Directors of Public Health. The supervision and advice rendered by these officers have done much in recent years to assist the local bodies in effecting improvement in sanitation and health of the areas.

There are four school medical officers and four assistant school medical officers for the four divisions of the province. There is also a lady school medical officer for the girls' schools. In addition to her own duties she is employed as Medical Inspectress of Factories in accordance with the recommendation of the Royal Commission on Labour to examine the health of the female employees of factories in Patna district.

Epidemic doctors of sub-assistant surgeon grade are employed temporarily by Government and they are detailed to help local bodies in combating

epidemics in the province. Over and above these, one hundred reerve of vaccinators are provided for duties in the districts, who in addition to vaccination work, are also trained to carry out disinfection during epidemics.

Anti-malarial and kala-azar schemes continued to function in the districts of North Bihar and doctors of sub-assistant surgeon grade were employed to work at the various kala-azar and anti-malarial centres and Vaidyas and Hakims remained employed in Tibbi and Ayurvedic centres in the Muzaffarpur district.

A medical officer of health is in charge of the Public Health Bureau, which is attached to the office of the Director of Public Health. He contributes popular articles to the press on the public health subjects and prepares and distributes posters, pamphlets and leaflets to the local bodies. He delivers lectures in hygiene to the Police Cadets at the Police Training College, Hazaribagh, and also at melas and fairs with the aid of magic lantern slides.

Seven medical officers of the Government Public Health cadre have been lent to the district boards of Muzaffarpur, Saran, Champaran, Gaya, Bhagalpur, Shahabad and Darbhanga to work as health officers of the district boards. A medical officer of health of the department continued to work as the Chief Medical Officer of Health, Jharia Mines Board of Health.

Three medical officers of the cadre have also been lent to the municipalities of Patna, Gaya and Ranchi to work as health officers.

A medical officer is employed as Chemical Analyst at the Public Health Laboratory where water and articles of food are analysed. The post of Chemical Examiner for Excise is held by a Chemist who is a non-medical man. A medical officer of the cadre has also been appointed as Officer-in-charge of the Bacteriophage Laboratory. A medical officer of the department has also been appointed as Officer-in-charge, Nutrition Scheme.

A medical officer of the cadre also works as Superintendent of Vaccine Depot at Namkum. Vaccine lymph is manufactured and distributed throughout the province from this depot.

CHAPTER XIII.

ANNUAL VACCINATION REPORT IS SUBMITTED AS AN ANNEXURE TO THIS REPORT.

CHAPTER XIV.

OTHER PUBLIC HEALTH SERVICES.

1. *Jharia Mines Board of Health.*—The Jharia Mines Board of Health controls the sanitation of Jharia and the neighbouring areas which extend over an area of 787 square miles and covers the whole of the Dhanbad subdivision with the exception of the Dhanbad municipality. According to the census of 1931, the population of this area is 504,376 and the corrected population for 1939 excluding that of the municipality of Dhanbad is 546,638 as against 541,559 of 1938.

The total number of births during the year was 14,202 giving a birth-rate of 25·98 as against 27·21 of the previous year while the total number of deaths was 8,229 recording a death-rate of 15·05 as against 16·34 of the preceding year. The death rate has decreased by 1·29. The infant mortality-rate was reported to be 99 as compared with 115 in the previous year.

The total number of deaths from cholera, small-pox, fevers, and respiratory diseases was 90, 182, 6,096 and 282 respectively, as against 30, 17, 6.517

and 245 of the preceding year. 326 cases of venereal disease were reported among coolies and labourers and a large proportion of the fever deaths is presumed to have occurred, as usual, from malaria. The preventive measures against cholera and small-pox were taken by the health staff of the mining board. 7,992 anti-cholera inoculations and 47,172 vaccination operations were performed during the year.

Drainage.—The drainage scheme continued to be in full functioning order during the year and steps were taken to construct road-side drains in Poddar Kulhi and Jharia.

Water-supply.—In the course of the year one more colliery was connected to the Jharia Water Board mains, bringing thus the total number of the connected collieries to 201. It is considered that the collieries not yet linked up with Jharia Water Board supply constitute a source of danger to the neighbouring ones. Notices were, therefore, served on three collieries by the board requiring them to link up with the Jharia Water Board mains. The board reserved one tank for drinking water-supply at Katras throughout the year. Ten tanks were also reserved for this purpose in the colliery areas during the cholera season.

Sanitation.—Two rubbish lorries for carrying the refuse to the dumping ground were maintained througout the year in Jharia town and steps were taken to replace the existing old lorries by new ones. Refuse carts, some with pneumatic tyre equipment, were also maintained for the narrow lanes where the lorries find difficult to ply. All the 120 public latrines provided by the board were maintained in satisfactory state of repairs throughout the year.

Housing.—The five years' housing programme of the board introduced in 1936 remained in force during the year under report. Licenses for 30,321 dwelling houses were issued during the year and of these 29,424 licenses were issued for permanent structures.

Maternity and Child Welfare.—The work in connection with child welfare scheme was continued as in previous year. The whole area is divided in three circles, namely Sijua, Kenduadih and Jharia. Sijua circle has four centres while Kenduadih has six centres and Jharia circle has one centre. Three qualified health visitors were in charge of these circles. They regularly visited the centres, supervised ante-natal and post-natal conditions and conducted the practical training of the indigenous *dais*. Most of the normal labour cases were attended by the *dais* who had received training in previous years. These *dais* have all been supplied with fully-equipped boxes containing outfit required for conducting normal labour cases and are given annas four as a reward from the board's fund for conducting each labour case under the supervision of health visitors. Soap, milk and stock mixtures were also distributed to mothers and children at all centres throughout the year.

Food adulteration.—442 samples were analysed at the board's laboratory and 121 of these were found to be adulterated. 85 prosecutions were instituted and of these convictions were obtained in 68 cases.

Leprosy.—All the five clinics already functioning one each at Pandra, Jharia, Tetulmari, Dhanbad and Telmucho continued to work during the year.

2. *Hazaribagh Mines Board of Health.*—The Hazaribagh Mines Board controls the coalfields situated in Giridih, Bokaro and Ramgarh having an approximate area of 52 square miles. The estimated population of the mining settlement is about 75,000. A health officer of the Mines Board was appointed on the 8th March 1939. Three paid vaccinators were appointed in May 1939 for the three coalfields areas and two sanitary inspectors for the Giridih and Bokaro circles were also appointed in December 1939. The health officer visited the collieries and steps have been taken to maintain efficiency in sanitation by the provision of adequate latrine accommodation for labourers, construction and repair of drains and systematic dumping of refuse and disposal of night-soil. Conservancy arrangements of Jaridih Bazar have

been started with a view to check the spreading of epidemic diseases to the neighbouring collieries. A gang of sweepers and two refuse carts have been employed under the supervision of the sanitary inspector of the circle.

The collieries maintain their own water-supplies and drinking water, as a rule, was chlorinated throughout the year. Village wells were treated with bleaching powder by the board's disinfectors during cholera epidemics.

Cholera broke out in epidemic form in several villages and collieries of Giridih, Bokaro and Ramgarh. Altogether 54 cases were reported with nine deaths. The epidemic was soon brought under control. Cholera bacteriophage was used as a preventive and curative measure and preventive inoculations were given.

Small-pox broke out in an epidemic form in Giridih municipality early in December and in order to prevent its spread to the neighbouring collieries, mass vaccination was undertaken throughout the collieries and outside villages. A total of 1,233 persons received vaccination by the board's vaccination staff.

As malaria was found to be the cause of great sickness in certain collieries, it was decided to carry out the preliminary survey in all the areas under the Mines Board for selecting a suitable place for anti-malarial operations. It was found that the Bokaro area had the highest incidence of the disease and an anti-malarial unit was started there.

A scheme has been drawn up for maternity and child welfare work which includes three lady doctors for the three coalfield areas assisted by two midwives. The scheme has been approved by the board.

It has been proposed to extend the Food Adulteration Act in the Mines Board area.

Public Health Laboratory.—During the year, 3,721 samples were examined chemically and bacteriologically as opposed to 3,640 of the previous year. Of these 10 samples were received from private bodies.

Water.—1,173 samples of water were examined, i.e., 443 samples chemically and 730 samples bacteriologically. The following shows the source and the number of analysis :—

Water works	977
Jails	129
Other sources	67

Food stuff.—The total number of samples analysed was 2,531 as opposed to 2,284 of the previous year. The samples were received from all the districts of the province. One sample was received from Karimganj, Assam.

Ghee.—949 samples of ghee were analysed as opposed to 867 samples of the previous year. Of these 441 samples or 46·47 per cent were found below the standard or adulterated as opposed to 41·86 per cent of the previous year. 191 samples were found to be of doubtful purity.

Mustard oil.—1,133 samples of mustard oil were examined out of which 232 or 20·48 per cent were found to be below the standard or adulterated as opposed to 29·15 per cent of the previous year. 18 samples were found to be of doubtful purity.

Sweetmeats.—121 samples of sweetmeats (*Mithai, Puri, Kachauri,* etc.) were analysed with a view to find out if they were made of pure ghee or oil. Out of 121 samples analysed, 73 samples or 60·33 per cent were found to have been made of ghee or oil which was adulterated, as opposed to 52·86 per cent of the previous year.

Milk.—69 samples of milk were analysed of which 40 or 57·97 per cent were found adulterated as opposed to 49·11 per cent of the previous year.

Atta.—150 samples of *atta* or wheat-flour were analysed which were all found genuine.

Miscellaneous.—109 samples of miscellaneous articles, tea, butter, oils of different kinds, etc., were examined with the following results :—

Nature of samples.	Genuine or up to the standard.	Adulterated or below the standard.	Doubtful purity.	Total.
Ground-nut oil	26	3	1	30
Linseed oil	11	10	..	21
Sesame (Til) oil	5	..	..	5
Kachara oil	5	1	..	6
Cocoanut oil	1	..	..	1
Vegetable product	35	5	..	40
Tea	1	..	..	1
Gur (molasses)	2	..	..	2
Butter	..	2	..	2
Sugar	1	..	..	1
Total ..	87	21	1	109

Medicines. disinfectants, etc.—One sample of bleaching powder was examined for determination of available chlorine. Two samples of quinine mixture were examined to find out the amount of quinine in the mixure. Four samples of sullage water from the Chanpatia Sugar Factory, Champaran, three samples of sullage and river water from Harinagar Sugar Mills, Champaran, and two samples of sullage water from Bara-Chakia Sugar Mills, Champaran, sent by the health officer, district board, Champaran, were examined chemically. One sample of deposit from the strainers of Amlatola tube-wells was sent by the Executive Engineer, Public Health Division, Patna, to find out the nature and source of such deposits. The deposit was examined and the Executive Engineer was advised accordingly. Rideal Walker co-efficient was found for one sample of Phenola manufactured by the Bihar Industrial Works, Gulzarbagh, Patna.

Staff.—The post of Chemical Analyst was held by Dr. S. C. Ray, B. SC., M.B., B S., D.P.H., throughout the year. Two temporary additional posts, namely, a laboratory assistant and a clerk were sanctioned by the Government and appointments were made on the 30th October 1939. The rest of the staff were the same as in the previous year.

As Food Adulteration Act was extended to four places in Ranchi district, 12 places in Hazaribagh district, one place (i.e. Dumka) in Santal Parganas district, four places in Palamau district, 17 places in Singhbhum district, 58 places in Bhagalpur district, seven places in Monghyr district, 19 places in Purnea district, one place (i.e., Mokameh union board) in Patna district and in the entire area of Jharia Mining Settlement, more samples were received for analysis during the year than in the previous years. The additional appointments made during the year will facilitate in coping with the increased amount of work.

3. *Bacteriophage Laboratory.*—During the year under review there had been periods of considerable pressure on the laboratory with the preparation

of choleraphage. Towards the end of June the cholera was prevalent throughout the province and consequently there was heavy demand of choleraphage and it was deemed necessary to increase the stock of the phage. The production was increased by working double shift and thus the laboratory was in a position to meet all the requirements. This extra production continued till November.

Production.—The production of bacteriophage during the year was as follows :—

Opening balance of Choleraphage in 50 c. c. phials ...			40,848
Choleraphage in 50 c. c. phials	...	...	2,25,612
Choleraphage in 5 c. c. ampoules	...	...	1,000
Dysenteryphage phials ...	...	...	7,250
Dysenteryphage ampoules ...	...	...	2,468
Typhoidphage ampoules ...	...	...	630

220,659 phials of choleraphage were issued to the local bodies and Civil Surgeons. 11,935 phials were issued to Orissa. It was decided by the Government that the Jail Department of this province who had been purchasing bacteriophage from outside, should obtain their supply free of cost from this laboratory. 1,712 phials of choleraphage and 1,738 ampoules of dysenteryphage were supplied during the year under report.

The Medical College Hospitals, Patna, have been getting their supply of phage free from this laboratory. Requisitions have also been received from some of the districts and Subdivisional hospitals for the supply of phage.

Requisitions for bacteriophage were received from outside the province, viz., Benares municipality and the Nizam's State of Hyderabad. They were supplied on payment.

One thousand phials of choleraphage were supplied to the Director of Public Health, United Provinces, at his request free of charge.

The laboratory was made permanent from the 1st April 1939. The budget remained almost the same excepting for a cut of Rs. 1,000 in the contingency grant.

Despite the heavy work on production of bacteriophage, the research work was continued.

Bacteriophage virulent against different intestinal pathogens were separated and studied. The same line of work was followed for preparing the Intestinal phage. Potent bacteriophage active against different bacteria invading intestinal tract were isolated, studied and the best method of propagating them were worked out. After several months' work, a mixture of polyvalent bacteriophage active against almost all the intestinal pathogens were prepared and successfully tried. The mixed phage was very potent and a small quantity was issued to the public and the hospitals.

Dysenteryphage.—The Dysenteryphage mixture was improved very much in the year under review, and besides Bacterio Flexner and Shigaphage active against Bact. Soune and P. Morgani were incorporated in the mixture. Thus the present mixture of phage is active against all the common forms of dysentery organisms met with in tropics.

The experiment to find out the possibility of using phage in place of vaccine for the production active immunity is being continued. A new line was worked out to have the phage in more concentrated manner. Although the agglutinin titre increased with this phage, still it is not yet equal to that of the titre of serum in the batch which was inoculated with V. choleræ.

Viability of phage in ordinary disinfectants :—It has been accepted that bacteriophage is killed by the action of disinfectants. During epidemics of cholera patients are asked not to use the water disinfected with bleaching powder. As there is a great doubt whether phage is killed by the action of bleaching powder used for disinfecting water, efforts were made to find out the action of bleaching powder on phage.

d'Herelle and others have noted that bacteriophage is more resistant to disinfectants than the ordinary bacteria. In order to find out if the bleaching powder as ordinarily used in wells, kills bacteriophage, the following preliminary experiments were carried out :—

Bleaching powder in different proportions were added to well water in big flasks.

The bleaching powder contained 26·4 per cent of available chlorine. Disinfection was done in the proportion 1 part, 2, 5, 10, 25, 50, 100, 200, 250, 500 parts per million. They were distributed in big test tubes in quantities of 1 c. c., 2 c. c. upto 11 c. c.

Bacteriophage suspension containing about 1×10 per c. c. were added in quantity of 5 c. c. in each tube. A control tube was kept adding equal quantity of physiological normal saline solution.

Platings were done immediately after the addition of phage, and then 1, 2 hours, 4 hours and 24 hours after.

Experiments showed that the phage is not killed by the ordinary chlorinated water when in contact up to 24 hours in the proportion of one part per million which is some time exceeded in disinfecting ordinary well water; This experiment to find out the critical period at which the diminution of number of phage occurs when in contact with chlorine is being investigated.

Bacteriophage active against streptococcus faecalis.—Search for phage against enterococci was made but no potent phage has yet been obtained. The work is being continued.

Bacteriological Examination of Vaccine lymph.—The laboratory has undertaken the routine bacteriological examination of vaccine lymph prepared at Namkum Vaccine Depot and 388 samples were examined. The examination includes total count per c. c. presence of homeolytic streptococci, Pseudomona pyocyanea and gas producing anærobes. The reports were sent to the Superintendent, Vaccine Depot for his information.

The laboratory examined 120 samples of stools from cases of clinical cholera, dysentery and enteric fever.

Clinical symptoms of—				Result.
Cholera	...	...	...	21 Positive.
Dysentery ...	...	...	...	15 ,,
Enteric fever	...	...	...	2 ,,

Preservation of vaccine lymph in capillary and collapsible tubes.—In order to find out the routine value of preserving vaccine lymph in a state of more bacteriological purity 10 batches of vaccine lymph were filled in glass capillary tubing and in collapsible tubes. Ten samples of each batch in collapsible tubes and 10 samples of each batch in capillary tubes were tested for total number of colony per c. c. In all 200 samples were examined. The figures are under statistical analysis and the result will be given later.

One sample of a disinfectant was examined for determining the R. W. co-efficient. The report was sent to the Director of Public Health.

Dr. L. R. N. Shah Deo acted as the Officer in-charge of the laboratory from the 1st to the 14th January 1939 when Dr. S. K. Chatterji returned from study leave and took over the charge of the laboratory.

Excise Laboratory.—The samples, as usual, consisted of distillery samples, indigenous and B. P. medicinal preparations, water, methylated spirit,

denaturants, instruments and exhibits received from the various Criminal courts, etc. The number and the type of the various articles that were analysed are given below :—

1.	Spirit	36
2.	Spent Mahua	9
3.	Raw Mahua	9
4.	Fermented Wash	12
5.	Spent Wash	9
6.	Molasses	6
7.	Denatured or methylated spirit	55
8.	Caoutchoucine	8
9.	Pyridine	4
10.	Water	109
11.	Cocaine	6
12.	Opium and opium preparations	21
13.	Ganja	2
14.	Mritsanjibani	17
15.	Spirituous medicinal preparations, viz., tinctures ..	225
16.	Hydrometer sets	165
17.	Thermometers	167
18.	Spare spindles	2
	Total ..	862

All the samples were received from the Province of Bihar only. The total number of samples analysed during the previous three years is given below :—

1937	.. .. ..	727 (Bihar) and 67 (Orissa).
1938	.. .. ..	667 (Bihar only).
1939	.. .. ..	862 (Bihar only).

A comparison of the figures for the last three years for the province of Bihar will show that during the year under review there has been an increase of 195 samples compared to the year 1938 and 135 samples compared to the year 1937.

Besides the usual routine analysis, experiments were conducted to find out a suitable preservative and its dose for the preservation of Nira or "Sweet Tari".

The Excise laboratory completed the fifth year of its existence. The post of Chemical Examiner for Excise was held by Mr. Husnain.

Nutrition Scheme.—The local Government had been pleased to sanction the scheme on a temporary basis from last year. The working of the section of Nutrition was carried out throughout the year under review and its activities may be summed up under three different heads :—

(1) Field work comprising of dietary and nutrition survey.

(2) Analytical work consisting of the assessment of food value of the edibles grown in this province.

(3) Propaganda Work.

Field work.—The dietary and nutrition survey operations started in the district of Santal Parganas by the end of the year 1938, were completed by March 1939. The food intake of 126 Santal familes, 39 Malpaharia families, 44 Sauria paharia families, 7 *Mahali* families and 5 *Dom* families comprising of 684, 214, 213, 27 and 25 persons respectively was investigated. The consumption of calories *per capita per diem* varied between 1,400 to 2,000.

Judged quantitively the amount of food consumed was found to be extremely inadequate in the majority of cases. The intake of protein was found to be much below the standard and the percentage of animal protein was insignificant. Consumption of milk products was unknown.

1,463 Santal and 544 Pahari children were examined as to their state of physique. In each age group the Santal children were found to be more healthy than the Paharia. The former also showed a smaller percentage of deficiency conditions. The above observations coupled with the fact that the food of the Santal contains a larger percentage of protective foods in the form of edible green leaves (or *sag*) demonstrate the utility of the inclusion of this particular item of diet (green leaves).

The dietary investigations in the hostels attached to the college all over the province were also concluded during the year. Analysis of foodstuff issuing from 62 different kitchens catering to 1,238 students of the Patna University was carried out. Quantitative defects in the dietary were noticed in two kitchens only. Except in the Medical and Engineering College hostels the food consumed by the majority of the University students was found to be unbalanced. The intake of animal protein (including the dairy produce) and leafy vegetable fell short of the prescribed standard. It may be stated that in almost all cases this qualitatives defect could be remedied without any extra expenditure by a judicious selection of the edibles. An investigation into the incidence of commoner ailments amongst 1,618 University students revealed the fact that more than 20 per cent suffer from defective vision.

During the latter part of the year an investigation into the food intake of 150 miner's families in Jharia coalfield area was carried out. On the analysis of data it was found that with the increase in income the number of dependants in the family also increased. The main deficiencies noticed in the dietary were animal proteins (including milk) and leafy vegetables. A little more than 1,500 children of the miners were examined clinically as to their states of nutrition and about one-fifth of the total number was found to be malnourished. The incidence of caries in the mining area (10 per cent approximately) was found to be much less prevalent as compared to corresponding figures for the industrial area of Jamshedpur. The incidence of Phrynoderma and angular stomatitis varied between six and eight per cent.

Analytical work.—Ninety kinds of vegetables and fruits grown in this province were analysed for vitamins A and C contents. The leafy vegetables were found to be richer in both the vitamins as compared to other vegetables or fruits. The tender leaves of Bengal gram and peas (*Boont sag and Kelao sag*) and spined Amaranth (*Kanta gendhari*) were found to be particularly rich. Among the fruits *Barhar* (Artocarpus lakoocha) papaya (carica payaya) and luscious mesocarp of ripe palmyra (Borassus flabellifer) or *Tarh ka feda* were found to be particularly rich in carotene (pro-vitamin A.) A common vegetable which is known by the name of *Chathail or Kheksa* (Momordica cochinchinesis) was found to be an extremely potent source of Ascorbic acid (vitamin C.)

The potentialities of various products from palmyrah palm (Borassus flabellifer) as edibles were investigated and their food values assessed chemically. The dried pulp of the ripe fruit was found to be very rich in pro-vitamin A. The flours made from seedlings were found to contain about four per cent protein. By far the most abundant produce from the tree is the *Nira* or sweet toddy. This rich sachherine juice trickles down from the crushed inflorescence and usually wasted (?) as cheap drink or toddy. If preservation be added the unfermented juice can be used with advantage as a nutritive beverage by the children. Besides being rich in mineral matter it was found to contain vitamin C. The juice can also be thickened over slow fire and made into jaggery. In certain respects this jaggery was found to be superior in nutritive value as compared to the one made from sugarcane juice. Out of seven preservatives tried with *Nira* ordinary bazar slaked lime was found to be the most efficient. Besides arresting fermentation in dosage of about 0·25 gms. per 100 c. c. it could effectively stop inversion of sucrose.

Propaganda work.—The usual three day-course of lectures on "Dietary" followed by magic lantern demonstrations were delivered to the rural health staff in the districts of Bhagalpur, Saran, Champaran and Muzaffarpur. The lectures were delivered at the district board offices where the subordinate sanitary officers were made to assemble at their respective headquarters. Lectures on similar lines were delivered to the students at the Government Sanitary School, Gulzarbagh and Rural Reconstruction Institute at Phulwari-Sharif. Besides the informal popular talks delivered at the various educational institutions the nutrition officer delivered a special lecture on "square meal" at Jamshedpur Rotary Club on special invitation to lunch. A popular lecture on "Hamaray Khadya" in Hindi was also delivered at Brindaban (Champaran) during the sitting of the Gandhi Seva Sangh in May 1939. The following publications were made by the department during the year :—

A.—Original articles.

(1) Trend of dietary habits among college students in Bihar. Patna Journal of Medicine XIV, 1st January 1939.

(2) Food intake and physique of the University students in Bihar. Patna Journal of Medicine XIV, 3rd July 1939.

B.—Compilation and popular articles.

(1) Requirements for a square meal. Calcutta Medical Journal, March, 1939.

(2) Vitamins and their distribution in Nature. Darbhanga Medical Journal, September, 1939.

(3) Malnutrition in children. Patna Journal of Medicine. April, 1939.

(4) Best use of food. Manbhum District Board Gazette. April, 1939.

(5) Hamaray Khadya in Hindi (*Ibid* June, 1939).

CHAPTER XV.

GENERAL REMARKS.

1. *Leprosy relief.*—The Bihar Branch of the British Empire Leprosy Relief Association known as the Bihar Leprosy Relief Committee was constituted in 1926. The number of members in the Committee was increased to 11 during 1939. There were 46 outdoor clinics in the year against 41 of 1938. A new clinic was opened in Banka subdivision in the district of Bhagalpur one in Daltonganj in the district of Palamau, two in the district of Manbhum and one Mission Clinic at Manoharpur in the district of Singhbhum. 11,3[illegible]5 patients were treated during the year under report against 9,598 in the previous year.

The number of asylums was also increased from seven to eight. A new leper asylum was opened in Bhagalpur. 2,707 in-patients and 3,248 out-patients were treated in the asylums in 1939 against 2,223 in and 2,843 out-patients of 1938. A large number of patients were also treated in the outdoor department of the ordinary hospitals and dispensaries. The medical officers in charge of clinics were required to visit the adjoining villages, distribute leaflets on leprosy and deliver lectures with the aid of charts, magic lanterns, etc. The Welfare Department of the Tata Iron and Steel Co, Ltd., Jamshedpur, organised a Health and Industrial Exhibition and arranged for lantern lectures on the prevention of leprosy. This exhibition was visited by several lakhs of people.

A census of leper patients within five miles of Banka undertaken by the Civil Assistant Surgeon in charge of Banka subdivision showed that the number of lepers in that area had doubled within the last five years and that the disease was not confined to any particular community or class.

A certain amount of survey work was also done by the medical officer of the new leper asylum at Bhagalpur. An extensive survey was done by the district board of Manbhum in a highly leprous area of the district with a population of three and a half lakhs. This district being an industrial centre had become a potential source of infection to thousands of people from other districts who flock there. To arrest the further progress of this terrible disease the Manbhum district board drew up a scheme for starting four units or centres, one for the urban and three for rural areas at places where there was heavy incidence of this disease. The work at each of these units, consisted of propaganda, survey and treatment with a self-supporting leper home at a convenient part of the area for sheltering 120 lepers. A house-to house survey was also undertaken by Saldoha Leper Colony in Shikaripara in the district of Santal Parganas. 42 lepers were detected out of a population of 4,000.

The year under report has been one of steady progress in anti-leprosy activities in the province. Several new schemes were considered and some were put into force. The most important of these was the appointment by Government, with effect from March 1938, of a Provincial Anti-Tuberculosis and Leprosy Officer. The post is at present temporary but it is hoped that it will be made permanent. Equally important was the leprosy scheme in Manbhum for which Government have sanctioned a grant of Rs. 20,000. Besides these major schemes Government provided for a grant of Rs. 90,330 for capitation grant of Rs. 3-8-0 per patient, and for increased special grants for encouraging outdoor treatments in the leper asylums. Government also made a grant of Rs. 9,000 to the Saldoha Leper Colony for the construction of an indoor ward.

The district of Santal Parganas is also reported to heave much leprosy and a scheme for anti-leprosy work in the district on the line of the scheme in Manbhum district is under the consideration of Government.

2. *Inspection of factories and mines.*—The Assistant Director of Public Health, South Bihar Circle, inspected factories at Dalmia Nagar and Akbarpur in the district of Shahabad. The Assistant Director of Public Health, North Bihar Circle, inspected Harinagar Mills in Champaran and Samastipur Sugar Factory in Darbhanga district. He also inspected the mills and factories situated within the municipal areas of Kishanganj and Darbhanga. Three mines of Singhbhum district were visited by the Assistant Director of Public Health, Chota Nagpur Circle during the year. An enquiry into the complaints against Manbazar Copper Factory in Singhbhum district was also made.

3. *Rural and urban housing conditions.*—The houses in the villages mostly remain in the same condition as they were decades ago. Most of them consist of two or three-roomed huts with mud walls, mud floor and thatched roofs. A few of the roofs are tiled and belong to the prosperous land-owning classes. The huts are mostly badly designed and are often huddled together in a more or less compact area, situated in the midst of the fields which provide means of livelihood. They are usually located on high grounds as a safeguard against floods. The villagers sleep outside during the hot and dry months of the year, but they gather together for warmth inside their huts during the winter months. Cattle are kept near some of the huts but in most cases cattle, goats, fowls and dogs share the huts with the people. No building rules or bye-laws were enforced in the rural areas. There are no regular roads inside the villages. The lanes and pathways, as they are in existence are not paved and become muddy in the wet weather. No organised conservancy service exists in the villages. The lanes and pathways are seldom swept and refuse and house sweepings are deposited for the most part on some convenient spot outside the huts. There are seldom any latrines. The fields and vacant plots of the land in close proximity to the villages often within a few yards from the huts, are used for purposes of nature. Cow-dung on account of its value as manure is also stocked either inside the hut itself or somewhere very near it. Some of the fairly well-to-do inhabitants use pit privies which are known as Sandas.

The housing conditions in the urban areas are very much better. The urban population mainly consists of the rich landowners who in most cases being dissatisfied with the lack of modern amenities in the villages have migrated to the towns. Business or professional men and various Government servants, all of them being placed in prosperous position in life, have provided for themselves much more high standards of living and better houses to live in. Building regulations and bye-laws are enforced in all the municipalities and provisions are made for the various sanitary arrangements. An organised conservancy service exists in most of the bigger towns, namely, Gaya, Patna, Bhagalpur, Muzaffarpur, Monghyr, Arrah and Daltonganj.

The Assistant Directors of Public Health regularly visit the rural areas and the municipalities. During their tours they look into the working of district and municipal health organisations and investigate into nuisances, if any, and suggest measure to remedy the same. Copies of the reports of the Assistant Directors of Public Health are sent to the District Magistrates, Divisional Commissioners concerned and to Government. These reports serve as the only means to know the state of sanitation in the municipal and rural areas and the action taken by the local bodies to remove the defects pointed out in the reports.

4. *Personal proceedings and office.*—During the year under report the office of the Director of Public Health was held by Lt.-Col. S. L. Mitra, I. M. S., from 1st January to 10th April and again from the 28th June to the 31st December 1939 and Rai Bahadur Dr. B. P. Mozoomdar from 11th April to the 27th June 1939. Of the Assistant Directors of Public Health, Rai Bahadur Dr. B. P. Mozoomdar remained in charge of the South Bihar Circle from 1st February to 8th April and 27th June to 16th October and again from 15th November to 31st December 1939 and Khan Sahib Dr. S. M. Rahman from 1st January to 31st January and 9th April to 26th June and again from 17th October to 14th November, whilst Rai Sahib Dr. A. N. Chatterjee was in charge of the Chota Nagpur Circle throughout the year. Captain A. W. West, I. M. S., was in charge of the North Bihar Circle from the 1st January to 12th May and Khan Sahib Dr. S. M. Rahman from 13th May to 22nd May and again from 5th July to 31st December 1939 and Dr. Azizur Rahman from 23rd May to 4th July 1939.

5. *Touring.*—During the year the Director of Public Health was on tour for 82 days and the Assistant Directors of Public Health, South Bihar, North Bihar and Chota Nagpur Circles for 161, 169 and 157 days, respectively.

6. *Personnel.*—In conclusion I would like to bring to the notice of Government the good work done by the Assistant Directors of Public Health and my Personal Assistant. Rai Bahadur Dr. B. P. Mozoomdar, Rai Sahib Dr. A. N. Chatterji, Khan Sahib Dr. S. M. Rahman, Dr. H. Prasad and Rai Sahib Dr. S. K. Chatterjee gave further proofs of their reliable work. The work of Drs. Azizur Rahman, D. B. Mukherji and Gobind Prasad has been commendable. Dr. K. Mitra carried out nutrition work very satisfactorily and has made useful contributions on the subject.

S. L. MITRA, LT.-COL., I.M.S.,
Director of Public Health, Bihar.

ANNUAL VACCINATION REPORT

OF THE

Province of Bihar for the year 1939-40.

1. The statistics in the Vaccination Report are for the financial year while the statistics in the Annual Public Health Report are for the calendar year. The arrangement facilitates the inclusion of the figures for the complete vaccination season from October to March in the Vaccination Report.

2. *Staff.*—Lieutenant-Colonel S. L. Mitra, I.M.S., held charge of the office of the Director of Public Health from 1st April to 10th April 1939 and from 28th June 1939 to 31st March 1940. Rai Bahadur Dr. B. P. Mozoomdar held charge of the office of the Director of Public Health from 11th April 1939 to the 27th June 1939.

Rai Bahadur Dr. B. P. Mozoomdar was in charge of the South Bihar Circle from 1st April 1939 to 8th April 1939, 27th June 1939 to 16th October 1939 and 15th November 1939 to 31st March 1940.

Khan Sahib Dr. S. M. Rahman was in charge of the South Bihar Circle from 9th April 1939 to 26th June 1939 and 17th October 1939 to 14th November 1939.

Captain A. W. West, I.M.S., was in charge of the North Bihar Circle from 1st April 1939 to 12th May 1939. Dr. A. Rahman, M.B., D.P.H., remained in charge of this circle from 23rd May 1939 to 4th July 1939 and Khan Sahib Dr. S. M. Rahman from 13th May 1939 to 22nd May 1939 and from 5th July 1939 to 31st March 1940.

Rai Sahib Dr. A. N. Chatterji held charge of the Chota Nagpur Circle for the whole year.

The provincial vaccination inspecting staff consisted of nine district inspectors and 20 sub-inspectors of vaccination. The total number of vaccinators employed during the year was 1,178, of whom 79 were employed in towns and 1,099 in rural areas. Vaccination is performed by paid vaccinators in the municipal areas while licensed vaccinators are generally employed to perform vaccination operations in the rural areas. Each district has been divided into suitable small areas (*elakas*) and a licensed vaccinator who also has an apprentice under him is permitted to carry out vaccination within his area or *elaka*. The licensed vaccinator is allowed to charge a fee of annas two to four for each vaccination operation performed in the houses. There are also free vaccination depots in areas where the Vaccination Act has been introduced and these are attended to by the vaccinators on fixed days in a week and no fee is charged for carrying out vaccination at these depots. Besides these licensed vaccinators, paid vaccinators are also employed by the local bodies for short periods to deal with outbreaks of small-pox. Over and above these, Government provide for the temporary appointment of one hundred paid vaccinators every year and the Director of Public Health sanctions the appointment of these vaccinators by the local bodies or the Civil Surgeons for such periods as are considered necessary for combating epidemics.

3. *Operations performed.*—1,837,461 vaccination operations were performed during the year as against 1,500,764 during the previous year. This shows an increase of 336,697 in the number of operations as compared with the figure for 1938-39.

There was an increase of 22,579 in the number of primary operations and an increase of 314,118 in the number of re-vaccinations done during the year under report. Of the total operations performed 66·72 per cent were successful as against 75·87 in the previous year.

1,790,835 operations were performed by the vaccination staff as against 1,464,040 done in the preceding year. Of these 1,013,690 were primary and 777,145 re-vaccinations as against 991,725 primary and 472,315 re-vaccinations in the preceding year. Although vaccination is generally recognised as the only preventive measure against small-pox, it has not yet become as popular as it should be with the masses in the province. When small-pox breaks out in an epidemic form the people show some degree of willingness to get their children vaccinated, but when the epidemic is absent the incentive is much less and the number of vaccinations performed also falls. This is illustrated by the fact that during 1926-27 when the disease broke out in an epidemic form, a greater number of vaccination was recorded, but the number of operations fell during 1928-29 when fewer cases of small-pox occurred. Again during 1932-33 when an epidemic of small-pox prevailed in the province, number of vaccinations increased by 368,090 operations over those performed in the preceding year while during the year 1934-35 which happened to be a milder year for small-pox, the total number of vaccination operations appear to have been proportionately less and in the year 1935-36, 164,049 more operations were performed than the preceding year. In 1936-37, 1,586,143 operations were performed. During the years 1937-38 and 1938-39 a total of 1,369,749 and 1,500,764 operations, respectively, were performed. During 1939-40, a total of 1,837,461 operations were performed.

4. *Vaccination in municipalities.*—The number of operations performed in municipalities increased by 83,665 as compared with last year's returns. The total number of operations performed was 240,496 and the number of successful operations was 85,473 of which 38,848 were primary and 46,625 re-vaccinations as against 38,039 and 23,777, respectively, in the previous year. The ratios of success in municipalities were 96·49 per cent for primary operations and 33·08 per cent for re-vaccinations as compared with 96·88 per cent and 34·90 per cent, respectively, of last year.

5. *Vaccination in districts.*—The number of operations performed in rural areas was 1,550,339 as compared with 1,307,209 in the preceding year and the ratios of success were 97·85 per cent for primary operations and 63·82 for re-vaccination.

The district of Patna reported a decrease of 23,143 and the districts of Gaya and Shahabad reported an increase of 5,442 and 6,552, respectively. The districts of Muzaffarpur, Darbhanga and Saran recorded increases of 14,263, 20,636 and 14,072 respectively. Champaran recorded decrease of 4,599. In all these districts, vaccination is controlled by the health officers of the district boards.

The districts of Bhagalpur and Monghyr recorded increase of 46,034 and 87,466, respectively, in the number of vaccination operations performed in these districts, and the districts of Purnea and Santal Parganas recorded a decrease of 13,303 and 11,075 respectively. Vaccination in the rural areas of the districts of Bhagalpur and Purnea is controlled by the health officers of the district boards, but the Civil Surgeons still function as Superintendents of Vaccination in the districts of Monghyr and Santal Parganas.

The districts of Hazaribagh, Ranchi, Manbhum and Singhbhum recorded increases of 29,272, 11,235, 23,408, and 54,135 operations, respectively, while the district of Palamau recorded a decrease of 4,086. The Civil Surgeons still continue to be the Superintendents of Vaccination in the districts of Ranchi, Hazaribagh, Singhbhum and Palamau because Health Organisation Scheme has not yet been introduced in these districts. Vaccination in the rural areas of the district of Manbhum is controlled by the health officer of the district board.

6. *Vaccination in towns and compulsory areas.*—Statement V shows that during the year 14,555 children under one year of age out of an available number of 21,748 or 66·92 per cent were successfully vaccinated.

The towns of Motihari, Bhabhua, Dumraor, Jagdishpur, Chapra, Madhubani, Hajipur, Lalganj, Darbhanga, Samastipur, Katihar and Raghunathpur show the smallest amount of vaccination work done.

7. *Protection of infants.*—During the year under report the number of children under one year, available for vaccination, was 920,535 and the number of successful operations was 280,046 or 304 per thousand as against 280,248 or 284 per thousand successful operations out of 984,300 available children during the previous year. The protection of infants in municipalities is separately shown in Statement V. It gives a ratio of 669 vaccination per thousand of the surviving infant population as compared with 582 per thousand in the previous year.

These figures still remain unsatisfactory inasmuch as they show that nearly three-fourths of the total number of infants under one year were left unvaccinated in the rural areas and little less than two-fifths in the municipal areas. This is attributed to the common prejudice of the people against vaccination at an early age. Though primary vaccination has been compulsory in the majority of the districts and all municipal towns in the province, vaccination of the infants and children is avoided by many people. There are obvious advantages in retaining the present age-limit to one year for compulsory primary vaccination. No untoward complication occurs after vaccination because the sooner an unprotected child is vaccinated the quicker it acquires protection against the disease and ceases to remain a source of danger to the community.

8. *Incidence and mortality of small-pox.*—The total number of deaths that occurred from small-pox in the province during the last ten years was 139,362. During the first five years the number of deaths was 76,338 while during the next five years 63,024. In each of the last five years the mortality was as follows :—

21,179, 18,216, 6,877, 5,967 and 10,785. The provincial ratios of the mortality from small-pox per thousand population during the last five years have been 0·65, 0·56, 0 21, 0·18 and 0·33. There was a decrease in the incidence of small-pox in the province in 1927-28. In 1928-29 there was a further reduction and in 1929-30 there was a still further reduction in the number of cases. In 1930-31 there was a small increase over the figure of 1929-30. In 1931-32 there was a further increase over the figure of 1930-31. In 1932-33 there was still further increase and in 1933-34 there was recorded a great increase over the figure of 1932-33, in 1934-35 the mortality figure fell down considerably. In 1935-36 the figure was slightly more than the preceding year. In 1936-37 the figure was less than the figure of 1935-36. In 1937-38 and 1938-39 the mortality figures fell down considerably. In 1939-40 the figure was slightly more than the previous year.

9. *Prevention of small-pox.*—The proportion of vaccinated persons in the province still remains far below the figure necessary to prevent epidemic outbreaks. Although the total annual vaccination operations amount approximately to two millions or so, these are quite insufficient to ensure the immunity of the total population against small-pox. Hence the incidence of this fell disease continues to remain high. This state of affairs is not so much due to insufficiency or inefficiency of the existing arrangement for vaccination in the province, but is chiefly due to the inherent apathy of the public towards this simple and efficient method of protection. Small-pox is a preventable disease and vaccination can prevent it. In the light of this knowledge and in face of the unsatisfactory vaccination state of the people there is a great necessity for a more vigorous and complete vaccination policy. Primary vaccination has been made compulsory for many years in all municipal towns, but all the provisions of the Act do not appear to be rigidly enforced with the result that a great proportion of the children do not get vaccination until they cross the first year of their lives. Besides, a large number of unvaccinated persons are to be found in every municipal town.

The incidence of small-pox can be definitely prevented provided repeated vaccinations are practised, but re-vaccinations are always accepted with reluctance and the people do not seem to realise that immunity conferred by primary vaccination wears out within five to seven years. Thus during epidemics the percentage of protected persons is small and not until the diseases has had its toll that the public realise the importance of re-vaccination. It is, therefore, very desirable that re-vaccination should be made compulsory. Vaccination operations are easily done and generally cause no complications. No case of encephalitis following vaccination has so far been recorded in this province.

All the district boards which have health organisation schemes have now assumed the responsibility of the control of vaccination in the rural areas and the cost of running the vaccination schemes is insignificant.

The Bengal Vaccination Act is enforced in the districts of Patna, Gaya, Shahabad, Hazaribagh, Muzaffarpur, Darbhanga, Saran, Purnea, Champaran, Bhagalpur and Manbhum. Introduction of the Act in all the remaining districts of the province and definite arrangement for re-vaccination are necessary.

10. *Inspection of work.*—During the year under report the Assistant Directors of Public Health inspected 17,342 vaccinations (14,590 primary and 2,752 re-vaccinations) as gainst 27,898 in the previous year.

The Assistant Directors of Public Health performed vaccination inspection tours of 16 districts as compared with 14 in the previous year. Valuable reports were submitted on the work done in each of these districts.

11. The Superintendents of Vaccination of the province inspected 40,895 primary and 3,272 re-vaccinations against 42,243 primary and 4,323 re-vaccinations last year. The Vaccine Depot, Namkum, continued to supply the province with vaccine lymph throughout the year. A large supply of vaccine lymph is held in reserve and an ample stock of the necessary stores and supplies for the manufacture is maintained. 3,179,171 doses of vaccine lymph were manufactured during the year as compared with 2,542,745 doses last year. 3,358,815 doses were issued as against 3,070,958 in the previous year and 4,067,470 doses were left in stock at the end of the year. The number of calves used for the manufacture of lymyh during the year was 1,183 as compared with 978 in the previous year. The average yield of crude pulp per calf was 31·941 grammes. The total expenditure of the Vaccine Depot amounted to Rs. 34,910 during the year as compared with the expenditure of Rs. 33,428 of the previous year. The average cost of the vaccine lymph per dose came to 2·10 pies when calculated on the gross expenditure. The sale-proceeds of vaccine lymph was Rs. 35,016 as compared with Rs. 27,265 of the previous year.

12. *Vaccine Depot and Cold Storage.*—There was no serious outbreak of any epidemic disease among the calves. Only a few had a mild attack of foot and mouth disease but the outbreak was promptly checked. The death-rate of calves after admission into the Vaccine Depot was 1·44 per cent during the year as compared with 1·80 per cent of the previovs year. Besides vaccine lymph, cholera, plague and influenza vaccines were also as usual stocked at the depot.

The unsatisfactory condition of the old machinery was reported in last year and also in the previous year. The machines are too old and cannot be relied upon.

Sanction for the provision of an up-to-date electrically-driven Refrigerating plant and also for electrification of the building was received late in March 1940. It is expected that a new plant will be erected very soon. The scheme of electrically-worked cold storage includes provision of a new pump and electrification of the buildings.

13. *Experimental work.*—The following is a summary of the experiments carried out by the Superintendent during the year :—

Two goats were tried as vaccifer to see if they can be suitably used to replace the cow calves but the result so far obtained was far from satisfactory—the resulting crude pulp was poorer in quantity as well as in quality. Further trials will be made to find out if goats can be introduced into the seed regeneration cycle with any advantage.

Samples of lymph were sent to the Tropical School of Hygiene, Calcutta, for some experiments. A few samples of lymph were used to vaccinate guinea pigs to see if vesicles develop or not. In six cases out of seven there were development of good discrete vesicles.

A small quantity of seed lymph propagated from Hendon (England) was obtained from Belgaum Depot (Bombay) with a view to find out if that seed was superior to that of our depot and if that can be utilised to improve our strain. The result obtained with Belgaum seed was much the same as ours but it being one of a different strain was tried for rejuvenation of our seed. For rejuvenation of seed lymph a cow calf was vaccinated with a paste prepared from a few small-pox crusts, the resulting yield of crude pulp was very small and the same was pasted with glycerine and applied on a second calf ; this gave a very good yield both in quality and quantity. The resulting lymph has been stored separately in the cold storage from the well developed vesicles of buffalo calves soon after scraping was found to be quite good for improving the quantity and quality of pulp from cow calves if used immediately to vaccinate the latter.

It has been proved that vaccine lymph can retain its potency for a long time if stored at a temperature well below the freezing point and within a limit of permissible variation in the absence of light. Vaccine lymph manufactured in February 1928 and in January 1932 were used to vaccinate a few children in March 1940 and all the children gave a success rate of 95 to 100 per cent.

Vaccine lymph loaded in collapsible tubes if stored under suitable conditions in the room temperature, will continue to retain potency for more than three weeks during the winter months but vaccine lymph in glass capillary tubes gets deteriorated sooner (in two weeks) when placed in the same condition.

14. *Cost of the Department.*—The total cost of the Vaccination Department excluding that of the Vaccine Depot during the year, as noted in the Statement I, was Rs. 55,962 as against Rs. 55,420 in the previous year.

The cost per each successful operation was nine pies as compared with nine pies of the last year.

15. *Personnel.*—In conclusion I desire to bring to the notice of Government the good work done by the Assistant Directors of Public Health in their respective circles.

Dr. C. N. Banerji continued as the Superintendent of Vaccine Depot and his work has been very satisfactory.

S. L. MITRA, Lt.-Col., I.M.S.,

Director of Public Health.

X I.

stricts of Bihar Province during the year 1939.

Annual Form No. I.—Births registere

1	2	3			4			5			6	7	8	9			1
		Population according to the Census of 1931.			Number of Births registered.			Ratio of births per 1,000 of population.			Number of males born to every 100 females born.	Excess of births over deaths per 1,000 of population.	Excess of deaths over births per 1,000 of population.	Mean ratio of births per 1,000 during previous five years.			
No.	Districts.	Male.	Female.	Total.	Male.	Female.	T	Male.	Female.	Total.				Male.	Female.	Total.	No.
	PATNA DIVISION.																
1	Patna	956,124	890,350	1,846,474	31,871	30,137		17·2	16·3	33·5	...	11·1	...	17·4	16·9	34·3	1
2	Gaya	1,193,643	1,194,819	2,388,462	55,250	53,663		23·1	22·5	45·6	...	17·2	...	23·2	22·3	45·5	2
3	Shahabad ...	999,099	994,390	1,993,489	41,686	38,133		20·9	19·1	40·0	...	14·8	...	21·3	19·6	40·9	3
	Total ...	3,148,866	3,079,559	6,228,425	128,807	121,933		20·7	19·5	40·2	...	14·6	...	20·9	19·8	40·7	
	TIRHUT DIVISION.																
4	Saran	1,220,049	1,266,419	2,486,468	46,423	43,741		18·7	17·5	36·2	...	13·7	...	19·1	18·6	37·7	4
5	Champaran ...	1,080,956	1,064,731	2,145,687	36,592	34,660		17·0	16·2	33·2	...	11·8	...	17·6	16·7	34·8	5
6	Muzaffarpur	1,443,847	1,497,178	2,941,025	51,492	48,511		17·5	16·5	34·0	...	10·6	...	17·9	17·3	35·2	
7	Darbhanga	1,570,959	1,595,135	3,166,094	53,404	50,727		16·9	16·0	32·9	...	10·6	...	16·3	15·5	31·8	
	Total ...	5,315,811	5,423,463	10,739,274	187,911	177,639		17·5	16·5	34·0	..	11·6	...	17·6	16·7	34·3	
	BHAGALPUR DIVISION.																
8	Monghyr	1,145,797	1,141,357	2,287,154	41,164	38,072		17·9	16·7	34·6	..	10·6	...	19·3	18·2	37·5	
9	Bhagalpur	1,130,584	1,104,048	2,234,632	35,707	33,035		15·9	14·8	30·7	...	6·9	...	16·2	15·3	31·5	
10	Purnea	1,129,681	1,056,862	2,186,543	34,113	31,557		15·6	14·4	30·0	...	3·6	...	15·5	14·1	29·6	
11	Santal Parganas	1,025,921	1,025,551	2,051,472	22,397	21,553		10·9	10·5	21·4	...	3·4	...	13·6	13·0	26·6	
	Total ...	4,431,983	4,327,818	8,759,801	133,381	124,217		15·2	14·2	29·4	...	6·1	...	16·2	15·2	31·4	
	CHOTA NAGPUR DIVISION.																
12	Hazaribagh	751,956	765,401	1,517,357	25,591	24,094		16·9	16·3	33·1	...	11·0	...	17·8	17·3	35·1	
13	Ranchi	777,063	790,086	1,567,149	24,711	23,877		15·8	15·2	31·0	...	6·4	...	15·1	15·4	30·5	
14	Palamau	409,778	408,958	818,736	17,402	16,505		30·3	27·4	28·9	...	12·5	...	21·6	21·0	42·6	
15	Manbhum	940,009	870,881	1,810,890	25,292	23,603		13·9	13·0	27·0	...	10·3	...	14·4	13·4	27·8	
16	Singhbhum	469,421	460,381	929,802	11,149	11,071		11·9	11·9	23·8	...	9·1	...	12·8	12·1	24·9	
	Total ...	3,348,227	3,295,707	6,643,934	104,145	99,750		15·7	15·0	30·7	...	9·1	...	16·2	15·5	31·7	
	Total for the Province ..	16,244,887	16,126,547	32,371,434	554,244	523,539		17·1	16·2	33·3	106	10·3	...	17·6	16·6	34·2	

APPENDIX I—*contd.*

Annual Form No. 1A.—Births registered according to class in each town and rural areas in the districts of Bihar province during the year 1939—contd.

1	2			3			4			5			6			7		
	Christians.			Hindus.			Muhammadans.			Buddhists.			Other Classes.			Total.		
Registering circle.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
PATNA.																		
Patna town	2	...	2	1,150	977	2,127	284	191	475	...	...	...	3	3	6	1,439	1,171	2,610
Bihar town	...	...	...	252	243	495	48	48	96	...	...	...	...	...	...	300	291	591
Dinapur Nizamat town	...	...	...	26	22	48	3	8	11	...	...	...	...	...	...	29	30	59
Dinapur Cantonment	...	...	...	26	21	47	15	10	25	...	...	...	...	...	...	41	31	72
Barh town	...	...	...	49	41	90	11	11	22	...	...	...	...	...	...	60	52	112
Khagole town	...	...	...	44	36	80	6	9	15	...	...	...	...	...	...	50	45	95
Total of towns ...	2	...	2	1,547	1,340	2,887	367	277	644	...	...	...	3	3	6	1,919	1,620	3,539
Total of rural ...	...	1	1	28,134	26,727	54,861	1,818	1,789	3,607	...	...	...	...	...	...	29,952	28,517	58,469
Total of district ...	2	1	3	29,681	28,067	57,748	2,185	2,066	4,251	...	...	...	3	3	6	31,871	30,137	62,008
GAYA.																		
Gaya town	...	...	...	1,255	1,193	2,448	282	248	530	...	...	...	...	...	...	1,537	1,441	2,978
Tikari town	...	...	...	97	82	179	17	27	44	...	...	...	...	...	...	114	109	223
Daudnagar town	...	...	...	159	147	306	43	35	78	...	...	...	...	...	...	202	182	384
Total of towns ...	...	...	...	1,511	1,422	2,933	342	310	652	...	...	...	...	...	...	1,853	1,732	3,585
Total of rural ...	...	...	...	48,914	47,628	96,542	4,483	4,303	8,786	...	...	...	...	...	...	53,397	51,931	105,328
Total of district ...	...	...	...	50,425	49,050	99,475	4,825	4,613	9,438	...	...	...	...	...	...	55,250	53,663	108,913
SHAHABAD.																		
Arrah town	...	...	...	212	161	37[illegible]	59	65	125	...	...	...	...	...	...	271	227	498
Buxar town	...	...	...	130	101	23[illegible]	31	38	69	...	...	...	...	...	...	161	141	302
Dumraon town	...	...	...	112	69	18[illegible]	29	24	53	...	...	...	...	...	...	141	93	234
Jagadispur town	...	...	...	57	30	8[illegible]	25	11	36	...	...	...	...	...	...	82	41	123
Sasaram town	...	...	...	170	180	350	76	66	142	...	...	...	...	...	...	246	246	498
Bhabua town	...	...	...	55	45	100	34	19	53	...	...	...	...	...	...	89	64	153
Total of towns ...	...	...	...	736	588	1,32[illegible]	254	224	478	...	...	...	...	...	...	990	812	1,802
Total of rural ...	1	1	2	38,497	35,439	73,9[illegible]	2,198	1,881	4,079	...	...	...	...	...	...	40,696	37,321	78,017
Total of district ...	1	1	2	39,233	36,027	75,26[illegible]	2,452	2,105	4,557	...	...	...	...	...	...	41,686	38,133	79,819

APPENDIX I—*contd.*

Annual Form No. IA.—Births registered according to class in each town and rural circle in the districts of Bihar province during the year 1939—contd.

1	2			3	
	Christians.			Hindus.	
Registering circle.	Male.	Female.	Total.	Male.	Female.
SARAN.					
Chapra town	...	...	...	533	453
Revelganj town	...	...	...	155	130
Siwan town	..	...	...	265	274
Total of towns ...	...	...	...	953	857
Total of rural ...	...	...	...	36,878	35,201
Total of district ...	...	...	...	37,831	36,058
CHAMPARAN.					
Bettiah town	36	46	82	237	218
Motihari town	...	...	...	105	86
Total of towns	36	46	82	342	304
Total of rural	17	18	35	30,931	29,321
Total of district	53	64	117	31,273	29,625
MUZAFFARPUR.					
Muzaffarpur town	...	...	...	261	251
Sitamarhi town	...	...	...	124	103
Hajipur town	...	...	...	275	278
Lalganj town	...	...	...	144	145
Total of towns	...	...	...	804	777
Total of rural	6	3	9	44,655	41,863
Total of district	6	3	9	45,459	42,640
DARBHANGA.					
Darbhanga town	...	...	...	787	677
Rosera town	...	...	...	105	107
Samastipur town	...	...	...	100	97
Madhubani town	...	...	...	163	170
Total of towns	...	...	...	1,155	1,051
Total of rural	...	...	...	45,071	42,959

4			5			6			7		
Muhammadans.			Buddhists.			Other Classes.			Total.		
Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
190	161	341	...	...	...	...	...	...	723	604	1,327
51	43	94	...	...	...	...	...	...	206	173	379
79	97	176	...	...	...	...	...	...	344	371	715
320	291	611	...	...	...	...	...	...	1,273	1,148	2,421
8,272	7,392	15,664	...	...	...	...	...	...	45,150	42,593	87,743
8,592	7,683	16,275	...	...	...	...	...	...	46,423	43,741	90,164
114	110	224	...	...	...	...	...	...	387	374	761
63	40	103	...	...	...	...	...	...	168	126	294
177	150	327	...	...	...	...	...	...	555	500	1,055
5,089	4,821	9,910	...	...	...	...	...	...	36,037	34,160	70,197
5,266	4,971	10,237	...	...	...	...	...	...	36,592	34,660	71,252
75	85	160	...	...	...	...	...	...	336	336	672
19	17	36	...	...	...	...	...	...	143	120	263
65	28	93	...	...	...	...	...	...	340	306	646
20	33	53	...	...	...	...	...	...	164	178	342
179	163	342	...	...	...	...	...	...	983	940	1,923
5,848	5,705	11,553	...	...	...	...	...	...	50,509	47,571	98,080
6,027	5,868	11,895	...	...	...	...	...	...	51,492	48,511	100,003
303	255	588	...	...	...	...	...	...	1,090	932	2,022
3	...	3	...	...	...	...	...	...	108	107	215
24	14	38	...	...	...	...	...	...	124	111	235
88	87	175	...	...	...	...	...	...	251	257	508
418	356	774	...	...	...	...	...	...	1,573	1,407	2,980
6,760	6,361	13,121	...	...	...	...	...	...	51,831	49,320	101,151
7,178	6,717	13,895	...	...	...	...	...	...			

APPENDIX 1—*contd.*

Annual Form No. 1A.—Births registered according to class in each town and rural area in the districts of Bihar province during the year 1939—contd.

1	2			3			4			5			6			7		
Registering circle.	Christians.			Hindus.			Muhammadans.			Buddhists.			Other Classes.			Total.		
—	Male.	Female.	Total.	Male	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Monghyr.																		
Monghyr town	1	...	1	538	419	9[illegible]	134	103	237	...	...	...	...	...	...	673	522	1,195
Jamalpur town	1	6	7	497	400	8[illegible]	78	70	148	...	...	...	...	...	...	576	476	1,052
Total of towns	2	6	8	1,035	819	1,[illegible]	212	173	385	...	...	...	...	...	...	1,249	998	2,247
Total of rural	14	8	22	36,003	33,389	69,[illegible]	3,898	3,677	7,575	...	...	...	...	...	...	39,915	37,074	76,989
Total of district	16	14	30	37,038	34,208	71,[illegible]	4,110	3,850	7,960	...	...	...	...	...	...	41,164	38,072	79,236
Bhagalpur.																		
Bhagalpur town	...	...	...	317	263	[illegible]	90	58	148	...	...	...	...	...	...	407	321	728
Colgong town	...	...	...	59	51	[illegible]	15	15	30	...	...	...	...	...	...	74	66	140
Total of towns	...	...	...	376	314	[illegible]	105	73	178	...	...	...	...	...	...	481	387	868
Total of rural	...	...	...	32,591	30,193	62,[illegible]	2,635	2,455	5,090	...	...	...	...	...	...	35,226	32,648	67,874
Total of district	...	...	...	32,967	30,507	63,[illegible]	2,740	2,528	5,268	...	...	...	...	...	...	35,707	33,035	68,742
Purnea.																		
Purnea town	...	...	...	118	109	[illegible]	75	66	141	...	...	...	...	...	...	193	175	368
Kishenganj town	...	...	...	60	31	[illegible]	45	49	94	...	...	...	...	...	...	105	80	185
Katihar town	...	...	...	127	89	[illegible]	63	41	104	...	...	...	...	...	...	190	130	320
Forbesganj town	...	...	...	26	29	[illegible]	18	24	42	...	...	...	...	...	...	44	53	97
Total of towns	...	...	...	331	258	[illegible]	201	180	381	...	...	...	...	...	...	532	438	970
Total of rural	2	...	2	19,168	17,838	37,[illegible]	14,408	13,279	27,687	2	...	2	1	2	3	33,581	31,119	64,700
Total of district	2	...	2	19,499	18,096	3[illegible]	14,609	13,459	28,068	2	...	2	1	2	3	34,113	31,557	65,670
Santal Parganas.																		
Sahibganj town	...	...	...	34	16	[illegible]	9	6	15	...	...	...	4	2	6	47	24	71
Deoghar town	...	...	...	34	32	[illegible]	8	13	21	...	...	...	3	4	7	45	49	94
Dumka town	...	...	...	29	23	[illegible]	5	3	8	...	...	...	1	1	2	35	32	67
Madhupur town	...	...	...	21	19	[illegible]	4	2	6	...	...	...	4	1	5	29	22	51
Total of towns	...	...	...	118	95	[illegible]	26	24	50	...	...	...	12	8	20	156	127	283
Total of rural	49	43	92	10,988	10,360	[illegible]	2,882	2,818	5,700	...	...	...	8,322	8,205	16,527	22,241	21,426	43,667
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	2,908	2,842	5,750	...	...	...	8,334	8,213	16,547	22,[illegible]	[illegible]	[illegible]

APPENDIX I—*contd.*

*Annual Form No. IA.—Births registered according to class in each town and rural area in the districts of Bihar province during the year 1939—*concld.

1	2			3			4			5			6			7		
Registering circle.	Christians.			Hindus.			Muhammadans.			Buddhists.			Other classes.			Total.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
HAZARIBAGH.																		
Hazaribagh town	...	...	...	155	157	312	59	41	100	...	...	...	...	...	...	214	198	412
Chatra town	...	...	...	101	112	213	43	38	81	...	...	...	...	...	...	144	150	294
Giridih town	...	...	...	42	51	93	13	17	30	...	...	...	...	...	...	55	68	123
Total of towns	...	...	...	298	320	618	115	96	211	...	...	...	...	...	...	413	416	829
Total of rural	6	3	9	22,528	21,914	44,442	2,561	2,304	4,865	...	...	...	83	57	140	25,178	24,278	49,456
Total of district	6	3	9	22,826	22,234	45,060	2,676	2,400	5,076	...	...	...	83	57	140	25,591	24,694	50,285
RANCHI.																		
Ranchi town	47	44	91	306	273	579	112	94	206	...	...	...	...	1	1	465	412	877
Lohardaga town	4	6	10	63	41	104	26	25	51	...	...	...	10	9	19	103	81	184
Total of towns	51	50	101	369	314	683	138	119	257	...	...	...	10	10	20	568	493	1,061
Total of rural	3,439	3,414	6,853	7,698	7,255	14,953	1,003	987	1,990	...	...	...	12,003	11,728	23,731	24,143	23,384	47,527
Total of district	3,490	3,464	6,954	8,067	7,569	15,636	1,141	1,106	2,247	...	...	...	12,013	11,738	23,751	24,711	23,877	48,588
PALAMAU.																		
Daltonganj town	...	...	...	70	61	131	26	17	43	...	...	...	...	...	...	96	78	174
Total of rural	176	146	322	15,674	14,955	30,629	1,456	1,326	2,782	...	...	...	...	...	...	17,306	16,427	33,733
Total of district	176	146	322	15,744	15,016	30,760	1,482	1,343	2,825	...	...	...	...	...	...	17,402	16,505	33,907
MANBHUM.																		
Purulia town	4	3	7	172	171	343	24	7	31	...	...	...	7	5	12	207	186	393
Raghunathpur town	...	...	...	107	79	186	6	5	11	...	...	...	4	5	9	117	89	206
Jhalda town	...	...	...	66	61	127	...	1	1	...	...	...	1	3	4	67	65	132
Dhanbad town	3	3	6	182	194	376	49	62	111	...	...	...	...	...	...	234	259	493
Total of towns	7	6	13	527	505	1,03[illegible]	79	75	154	...	...	...	12	13	25	625	599	1,224
Total of rural	32	20	52	22,453	20,951	43,404	1,279	1,170	2,449	...	...	...	903	863	1,766	24,667	23,004	47,671
Total of district	39	26	65	22,980	21,456	44,436	1,358	1,215	2,603	...	...	...	915	876	1,791	25,292	23,603	48,895
SINGHBHUM.																		
Chaibassa town	7	6	13	130	111	241	9	17	26	...	...	...	...	...	...	146	134	280
Chakradharpur town	2	2	4	56	58	114	4	5	9	...	...	...	...	4	4	62	69	131
Jugsalai town	...	...	...	62	50	112	11	10	21	...	...	...	4	3	7	77	63	140
Jamshedpur town	19	25	44	397	341	738	30	21	51	...	...	...	7	6	13	453	393	846
Total of towns	28	33	61	645	560	1,20[illegible]	54	53	107	...	...	...	11	13	24	738	659	1,397
Total of rural	133	114	247	4,792	5,026	9,81[illegible]	95	87	182	...	...	...	5,391	5,185	10,576	10,411	10,412	20,823
Total of districts	161	147	308	5,437	5,586	11,02[illegible]	149	140	289	...	...	...	5,402	5,198	10,600	11,149	11,071	22,220
Province.																		
Total of towns	126	141	267	10,817	9,585	20,40[illegible]	3,013	2,581	5,594	...	...	...	48	47	95	14,004	12,354	26,358
Total of rural	3,873	3,5[illegible]	7,666	[illegible]	[illegible]	265,9[illegible]	64,685	60,355	125,040	2	...	2	26,703	26,040	52,743	540,240	[illegible]	[illegible]
Total of districts	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	67,698	62,936	130,634	2	...	2	26,751	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

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APPENDIX I—*contd.*

Annual Form no. IB.—Still births registered according to class in each town and rural areas in the districts of Bihar province during the year 1939—contd.

1	2			3			4			5			6			7		
Registering circle.	Christians.			Hindus.			Muhammadans.			Buddhists.			Other Classes.			Total.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
PATNA.																		
Patna town	..	..	..	3	8	11	5	2	7	..	..	..	..	..	..	8	10	18
Bihar town ..	..	..	..	1	5	6	..	..	..	..	..	..	..	..	..	1	5	6
Dinapur Nizamat town ..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	1	1
Dinapur Cantonment ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Barh town	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Khagole town ..	..	..	..	..	1	1	..	1	1	..	..	..	..	..	..	..	2	2
Total of towns ..	..	..	..	4	15	19	5	3	8	..	..	..	..	..	..	9	18	27
Total of rural ..	..	..	..	1,653	1,334	2,987	36	36	72	..	..	..	..	..	..	1,689	1,370	3,059
Total of district ..	..	..	..	1,657	1,349	3,006	41	39	80	..	..	..	..	..	..	1,698	1,388	3,086
GAYA.																		
Gaya town	..	..	..	85	72	157	19	11	30	..	..	..	..	..	..	104	83	187
Tikari town	..	..	..	2	..	2	..	..	..	..	..	..	..	..	..	2	..	2
Daudnagar town ..	..	..	..	6	3	9	..	..	..	..	..	..	..	..	..	6	3	9
Total of towns ..	..	..	..	93	75	168	19	11	30	..	..	..	..	..	..	112	86	198
Total of rural ..	..	..	..	1,565	1,311	2,876	109	85	194	..	..	..	..	..	..	1,674	1,396	3,070
Total of district ..	..	..	..	1,658	1,386	3,044	128	96	224	..	..	..	..	..	..	1,786	1,482	3,268
SHAHABAD.																		
Arrah town	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Buxar town	..	..	..	2	..	2	..	..	..	..	..	..	..	..	..	2	..	2
Dumraon town ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Jagadispur town ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Sasaram town ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Bhabua town	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total of towns ..	..	..	..	2	..	2	..	..	..	..	..	..	..	..	..	2	..	2
Total of rural ..	..	..	..	16	9	25	3	1	4	..	..	..	..	..	..	19	10	29
Total of district ..	..	..	..	18	9	27	3	1	4	..	..	..	..	..	..	21	10	31

APPENDIX I—*contd.*

Annual Form no. IB.—Still births registered according to class in each town and rural areas in the districts of Bihar province during the year 1939—contd.

1	2			3			4			5			6			7		
Registering circle.	Christians.			Hindus.			Muhammadans.			Buddhists.			Other Classes.			Total.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
SARAN.																		
Chapra town	..	..	..	50	52	102	9	9	18	..	..	..	..	..	..	59	68	120
Revelganj town ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Siwan town	..	..	..	2	2	4	..	..	..	..	..	..	..	..	..	2	2	4
Total of towns ..	..	..	..	52	54	106	9	9	18	..	..	..	..	..	..	61	63	124
Total of rural ..	..	..	..	1,223	1,016	2,239	207	175	382	..	..	..	..	..	..	1,430	1,192	2,621
Total of district ..	..	..	..	1,275	1,070	2,345	216	184	400	..	..	..	..	..	..	1,491	1,255	2,745
CHAMPARAN.																		
Bettiah town	..	..	..	2	3	5	3	1	4	..	..	..	..	..	..	5	4	9
Motihari town ..	..	..	..	..	1	1	..	1	1	..	..	..	..	..	..	..	2	2
Total of towns ..	..	..	..	2	4	6	3	2	5	..	..	..	..	..	..	5	6	11
Total of rural ..	..	..	..	1,232	1,081	2,313	249	199	448	..	..	..	..	..	..	1,481	1,280	2,761
Total of district ..	..	..	..	1,234	1,085	2,319	252	201	453	..	..	..	..	..	..	1,486	1,286	2,772
MUZAFFARPUR.																		
Muzaffarpur town ..	..	..	..	12	6	18	..	..	..	..	..	..	..	..	..	12	6	18
Sitamarhi town ..	..	..	..	2	1	3	..	..	..	..	..	..	..	..	..	2	1	3
Hajipur town	..	..	..	5	..	5	..	..	..	..	..	..	..	..	..	5	..	5
Lalganj town	..	..	..	14	7	21	..	..	..	..	..	..	..	..	..	14	7	21
Total of towns ..	..	..	..	33	14	47	..	..	..	..	..	..	..	..	..	33	14	47
Total of rural ..	..	..	..	1,918	1,600	3,518	405	338	743	..	..	..	..	..	..	2,323	1,938	4,261
Total of district ..	..	..	..	1,951	1,614	3,565	405	338	743	..	..	..	..	..	..	2,356	1,952	4,308
DARBHANGA.																		
Darbhanga town ..	..	..	..	15	17	32	1	1	2	..	..	..	..	..	..	16	18	34
Roserah town	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Samastipur town ..	..	..	..	3	1	4	..	..	..	..	..	..	..	..	..	3	1	4
Madhubani town ..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	1	1
Total of towns ..	..	..	..	18	19	37	1	1	2	..	..	..	..	..	..	19	20	39
Total of rural ..	..	..	..	810	686	1,496	66	58	124	..	..	..	..	..	..	876	744	1,620
Total of district ..	..	..	..	828	705	1,533	67	59	126	..	..	..	..	..	..	895	764	1,659

APPENDIX I—*contd.*

Annual Form no. IB.—Still births registered according to class in each town and rural areas in the districts of Bihar province during the year 1939—contd.

1	2			3			4			5			6			7		
Registering circle.	Christians.			Hindus.			Muhammadans.			Buddhists.			Other Classes.			Total.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
MONGHYR.																		
Monghyr town ..	..	..	..	5	3	8	..	..	..	..	..	..	..	..	..	5	3	8
Jamalpur town ..	..	..	..	5	8	13	..	..	..	..	..	..	..	..	..	5	8	13
Total of towns ..	..	..	..	10	11	21	..	..	..	..	..	..	..	..	..	10	11	21
Total of rural ..	..	..	..	1,519	1,191	2,710	451	432	883	..	..	..	..	..	..	1,970	1,623	3,593
Total of district ..	..	..	..	1,529	1,202	2,731	451	432	883	..	..	..	..	..	..	1,980	1,634	3,614
BHAGALPUR.																		
Bhagalpur town ..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	1	..	1
Colgong town ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total of towns ..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	1	..	1
Total of rural ..	..	..	..	561	424	985	107	97	204	..	..	..	..	..	..	668	521	1,189
Total of district ..	..	..	..	562	424	986	107	97	204	..	..	..	..	..	..	669	521	1,190
PURNEA.																		
Purnea town ..	..	..	..	5	6	11	2	1	3	..	..	..	..	..	..	7	7	14
Kishenganj town ..	..	..	..	..	..	..	2	..	2	..	..	..	..	..	..	2	..	2
Katihar town ..	..	..	..	3	4	7	1	1	2	..	..	..	..	..	..	4	5	9
Forbesganj town ..	..	..	..	1	2	3	..	..	..	..	..	..	..	..	..	1	2	3
Total of towns ..	..	..	..	9	12	21	5	2	7	..	..	..	..	..	..	14	14	28
Total of rural ..	..	..	..	803	615	1,418	516	443	959	..	..	..	..	..	..	1,319	1,058	2,377
Total of district ..	..	..	..	812	627	1,439	521	445	966	..	..	..	..	..	..	1,333	1,072	2,405
SANTAL PARGANAS.																		
Sahibganj town ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Deoghar town ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Dumka town ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Madhupur town ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total of towns ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total of rural ..	..	..	..	84	49	133	14	12	26	..	..	..	46	24	70	144	85	229
Total of district ..	..	..	..	84	49	133	14	12	26	..	..	..	46	24	79	144	85	229
HAZARIBAGH.																		
Hazaribagh town ..	..	..	..	4	1	5	..	..	..	..	..	..	..	..	..	4	1	5
Chatra town ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Giridih town ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total of towns ..	..	..	..	4	1	5	..	..	..	..	..	..	..	..	..	4	1	5
Total of rural ..	..	..	..	502	286	788	38	22	60	..	..	..	..	..	..	540	308	848
Total of district ..	..	..	..	506	287	793	38	22	60	..	..	..	..	..	..	544	309	853

APPENDIX I—*contd.*

Annual Form no. IB.—Still births registered according to class in each town and rural areas in the districts of Bihar province during the year 1939—concld.

1	2			3			4			5			6			7		
	Christians.			Hindus.			Muhammadans.			Buddhists.			Other Classes.			Total.		
Registering circle.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
RANCHI.																		
Ranchi town ..	..	..	..	7	2	9	1	2	3	..	..	..	..	..	..	8	4	12
Lohardaga town ..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	1	1
Total of towns ..	..	..	..	7	3	10	1	2	3	..	..	..	..	..	..	8	5	13
Total of rural ..	172	85	257	370	269	639	43	34	77	..	..	..	457	351	808	1,042	739	1,781
Total of district ..	172	85	257	377	272	649	44	36	80	..	..	..	457	351	808	1,050	744	1,794
PALAMAU.																		
Daltonganj town ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total of rural ..	1	1	2	362	281	643	12	14	26	..	..	..	..	..	..	375	296	671
Total of district ..	1	1	2	362	281	643	12	14	26	..	..	..	..	..	..	375	296	671
MANBHUM.																		
Purulia town ..	..	..	..	1	3	4	..	..	..	..	..	..	..	..	..	1	3	4
Raghunathpur town ..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	1	..	1
Jhalda town ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Dhanbad town ..	..	..	..	4	3	7	3	2	5	..	..	..	..	..	..	7	5	12
Total of towns ..	..	..	..	6	6	12	3	2	5	..	..	..	..	..	..	9	8	17
Total of rural ..	..	1	1	321	233	554	8	9	17	..	..	..	14	11	25	343	254	597
Total of district ..	..	1	1	327	239	566	11	11	22	..	..	..	14	11	25	352	262	614
SINGHBHUM.																		
Chaibassa town ..	..	..	..	1	3	4	..	..	..	..	..	..	..	..	..	1	3	4
Chakradharpur town ..	..	..	..	..	2	2	..	..	..	..	..	..	..	..	..	..	2	2
Jugsalai town ..	..	..	..	..	3	3	..	..	..	..	..	..	..	..	..	..	3	3
Jamshedpur town ..	..	..	..	17	18	35	..	..	..	..	..	..	..	..	..	17	18	35
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	26	44	..	..	..	..	..	..	..	..	..	18	26	44
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	136	..	..	..	..	..	..	105	85	190	185	141	326
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	180	..	..	..	..	..	..	105	85	190	203	167	370
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	46	32	78	..	..	..	..	..	..	298	268	566
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	2 264	1,955	4,219	..	..	..	622	471	1,093	15,518	12,489	28,007
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	2,310	1,987	4,297	..	..	..	622	471	1,093	15,816	12,757	28,573

APPENDIX 1—*contd.*

Annual Form No. 11.—Statement of Deaths registered in the districts of Bihar Province, during the year 1939.

1	2	3	4	5			6	7											8			9
				Number of deaths registered.				Death-rate per 1,000 of population from—								All causes.			Mean ratio of deaths per 1,000 during previous five years.			
No.	District.	Area in square miles.	Average population per square mile.	Male.	Female.	Total.	Number of deaths of males to every ...	Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	Male.	Female.	Total.	Male.	Female.	Total.	No.
	PATNA DIVISION.																					
1	Patna	2,068	893	21,417	20,046	41,463	[illegible]	0·6	0·1	...	14·8	0·5	0·5	0·3	5·4	22·4	22·5	22·5	21·6	22·1	21·8	1
2	Gaya	4,714	506	34,773	33,183	67,958	[illegible]	0·3	0·2	...	22·2	0·1	0·04	0·2	5·3	29·1	27·8	28·4	29·9	28·0	29·0	2
3	Shahabad	4,372	456	25,454	24,765	50,219	[illegible]	1·8	0·4	0·06	18·1	0·02	0·01	0·2	4·6	25·5	24·9	25 2	24·2	23·6	23·9	3
	Total	11,154	558	81,644	77,996	159,640	[illegible]	0·8	0·2	0·007	18·7	0·2	0·1	0·3	5·4	25·9	25·3	25·6	25·5	24·9	25·2	
	TIRHUT DIVISION.																					
4	Saran	2,683	927	29,430	26,385	55,815	[illegible]	0·4	0·4	0·5	13·1	0·8	0·4	0·4	6·9	24·1	20·8	22·5	22·2	19·1	20·6	4
5	Champaran	3,531	607	25,231	20,762	45,993	[illegible]	0·1	0·3	0·03	18·0	0·08	0·01	0·2	2·7	23·1	19·5	21·4	23·2	20·2	21·7	5
6	Muzaffarpur	3,036	968	37,066	31,797	68,863	[illegible]	0·1	0·2	0·1	20·8	0·06	0·05	0·4	1·9	25·6	21·2	23·4	25·8	22·8	24·3	6
7	Darbhanga	3,348	945	37,613	32,985	70,598	[illegible]	0·03	0·2	...	19·5	0·06	0·03	0·4	2·0	23·9	20·7	22·3	23·6	20·9	22·3	7
	Total	12,598	852	129,340	111,929	241,269	[illegible]	0·1	0·2	0·1	18·0	0·08	0·1	0·4	3·5	24·3	20·6	22·4	23·8	20·9	22·3	
	BHAGALPUR DIVISION.																					
8	Monghyr	3,927	582	29,411	26,846	56,257	[illegible]	0·7	0·7	...	19·2	0·07	0·03	0·3	3·7	25·7	23·5	24·6	25·6	23·6	24·6	8
9	Bhagalpur	4,226	528	28,190	24,973	53,163	[illegible]	0·9	0·3	0·02	20 2	0·05	0·02	0·2	2·1	24·9	22·6	23·8	26·7	24·3	25·5	9
10	Purnea	4,972	439	31,329	26,392	57,721	[illegible]	1·0	0·09	...	23·6	0·04	0·02	0·2	1·3	27·7	24·9	26·4	27·0	25·0	26·7	10
11	Santal Parganas	5,458	375	19,996	16,973	36,969	[illegible]	0·9	0·1	...	15·6	0·06	0·1	0·1	1·0	19·4	16·5	18·0	21·3	18·0	19·5	11
	Total	18,583	471	108,926	95,184	204,110	[illegible]	0·8	0·3	0·006	19·7	0·05	0·04	0·2	2·4	24·5	21·9	23·3	25·2	22·8	24·0	
	CHOTA NAGPUR DIVISION.																					
12	Hazaribagh	7,021	216	17,859	15,754	33,613	[illegible]	0·6	0·2	...	18·7	0·04	0·04	0 2	2·4	23·8	20·6	22·1	24 6	21·8	23·2	12
13	Ranchi	7,102	220	20,690	17,844	38,534	[illegible]	0·08	0·03	...	20·7	0 8	0·07	0·2	3 0	26·6	22·6	24·6	24·8	21·3	23·1	13
14	Palamau	4,916	166	12,443	11,194	23,637	[illegible]	0·1	0·5	...	23·8	0·03	0·02	0·3	4·1	30·3	27 4	28 9	20·7	27·3	28·3	14
15	Manbhum	4,095	442	16,928	13,354	30,282	[illegible]	·02	0·2		14·8	0 03	0·08	0·2	1·1	18·0	15·3	16·7	20 6	18 2	19·4	15
16	Singhbhum	3,879	239	7,558	6,122	13,680	[illegible]	0·03	0·02	...	12·8	0·1	0·008	0·2	1·5	16·1	13·3	14·7	18·2	15·4	16·8	16
	Total	27,013	235	75,478	64,268	139,746	[illegible]	0·2	0·1	...	17·8	0·2	0·04	0·2	2·5	22·5	19·5	21·3	23·3	20·5	21·9	
	Total for the Province	69,348	465	395,388	349,377	744,765	[illegible]	0·5	0·2	0 06	18·6	0·1	0·09	0·3	3·4	24·3	21·6	23 0	24·4	22·1	23 3	

A[PPEN]DIX I—*contd.*

Annual Form No. III.—Deaths registered in the districts of [...] *Province, during each month of the year* 1939—contd.

1	2		3					4							5	6
No.	District.		Population according to census, 1931.	January.	February.	March.	April.	June.	July.	August.	September.	October.	November.	December.	Total deaths registered during the year.	No.
	PATNA DIVISION.															
1	Patna District	Urban	258,284	215	161	172	190	164	305	357	263	210	141	266	2,552	1
		Rural	1,588,190	2,501	1,702	2,022	2,580	2,564	3,499	4,696	4,910	4,359	3,489	3,693	38,911	
		Total	1,846,474	2,716	1,953	2,194	2,770	2,728	3,805	5,053	5,173	4,569	3,630	3,899	41,463	
2	Gaya District	Urban	105,185	275	174	220	203	306	428	586	454	383	344	300	3,927	2
		Rural	2,283,277	3,620	2,701	3,435	3,818	4,952	5,415	7,830	8,005	7,531	6,068	5,527	64,031	
		Total	2,388,462	3,895	2,875	3,655	4,021	5,258	5,843	8,416	8,439	7,914	6,412	5,827	67,958	
3	Shahabad District	Urban	117,630	27	25	32	27	49	100	60	50	70	73	45	621	3
		Rural	1,875,859	3,241	2,097	2,979	2,449	4,014	4,540	6,324	5,847	6,588	4,518	4,360	49,598	
		Total	1,993,489	3,268	2,122	3,016	2,476	4,063	4,640	6,384	5,897	6,658	4,591	4,405	50,219	
	TIRHUT DIVISION.															
4	Saran District	Urban	70,475	82	108	208	164	127	192	197	117	102	86	110	1,611	4
		Rural	2,415,993	3,855	2,871	3,728	3,682	4,401	6,050	6,187	5,573	5,295	4,142	4,808	54,204	
		Total	2,486,468	3,937	2,979	3,936	3,846	4,528	6,242	6,384	5,690	5,397	4,228	4,918	55,815	
5	Champaran District	Urban	45,486	25	54	36	51	54	33	21	19	16	18	47	421	5
		Rural	2,100,201	3,710	2,403	2,787	3,957	4,180	4,009	4,402	4,461	4,031	3,488	4,643	45,572	
		Total	2,145,687	3,735	2,457	2,823	4,008	4,234	4,042	4,423	4,480	4,047	3,506	4,690	45,993	
6	Muzaffarpur District	Urban	82,241	130	69	132	129	116	129	116	132	132	130	97	1,435	6
		Rural	2,858,784	6,898	5,073	4,776	5,704	6,040	5,704	6,040	4,776	4,776	6,898	5,743	67,428	
		Total	2,941,025	7,028	5,142	4,908	5,833	6,156	5,833	6,156	4,908	4,903	7,028	5,840	68,863	
7	Darbhanga District	Urban	98,225	111	96	116	171	122	126	150	113	134	161	175	1,640	7
		Rural	3,067,869	6,796	4,060	5,093	5,550	5,566	4,122	5,444	5,297	6,169	6,316	8,030	68,958	
		Total	3,166,094	6,907	4,156	5,209	5,721	5,688	4,248	5,594	5,410	6,303	6,477	8,205	70,598	
	BHAGALPUR DIVISION.															
8	Monghyr District	Urban	83,209	84	71	90	122	86	109	108	124	94	89	105	1,190	8
		Rural	2,203,945	3,407	2,418	3,716	4,205	4,249	3,843	5,392	5,737	5,733	6,630	6,241	55,067	
		Total	2,287,154	3,491	2,489	3,806	4,327	4,325	3,952	5,500	5,861	5,827	6,719	6,346	56,257	
9	Bhagalpur District	Urban	89,080	45	50	67	75	49	63	52	69	46	69	79	724	9
		Rural	2,145,552	4,876	3,264	3,823	3,790	3,467	3,271	4,639	4,707	5,202	5,545	5,589	52,439	
		Total	2,234,632	4,921	3,314	3,890	3,865	3,516	3,334	4,691	4,776	5,218	5,614	5,668	53,163	
10	Purnea District	Urban	46,223	78	47	58	59	99	56	32	56	64	127	58	790	10
		Rural	2,140,320	5,159	3,972	4,629	5,456	4,695	4,515	4,090	4,669	4,185	4,728	6,164	56,931	
		Total	2,186,543	5,237	4,019	4,687	5,515	4,794	4,571	4,122	4,725	4,249	4,855	6,222	57,721	
11	Santal Parganas District	Urban	48,536	9	14	17	12	9	9	21	21	17	12	20	174	11
		Rural	2,002,986	2,199	1,747	2,723	3,020	2,728	3,012	4,326	3,913	3,137	3,436	3,391	36,795	
		Total	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	2,737	3,021	4,347	3,934	3,154	3,448	3,411	36,969	

DIX I—*contd.*

Annual Form No. III.—Deaths registered in the districts of [the] *Province, during each month of the year* 1939—concld.

1	2													4	5
No.	District.		Population according to census, 1931.	January.	February.	March.	April.	June.	July.	August.	September.	October.	November.	December.	Total deaths registered during the year.	No.
	CHOTA NAGPUR DIVISION.															
12	Hazaribagh District	Urban ...	50,857	18	20	18	26	28	29	43	27	22	34	28	321	12
		Rural ...	1,466,500	2,430	2,097	2,135	2,314	2,599	2,362	3,303	3,497	3,227	3,018	3,508	33,292	
		Total ...	1,517,357	2,448	2,117	2,153	2,340	2,627	2,391	3,346	3,524	3,249	3,052	3,536	33,613	
13	Ranchi District	Urban ...	58,094	19	19	57	39	39	66	61	28	34	37	55	501	13
		Rural ...	1,509,055	2,780	2,214	2,394	2,487	2,751	2,960	4,528	4,347	4,424	3,189	2,744	38,033	
		Total ...	1,567,149	2,799	2,233	2,451	2,526	2,790	3,026	4,589	4,375	4,458	3,226	2,799	38,534	
14	Palamau District	Urban ...	42,040	2	1	3	3	5	6	12	7	2	4	5	56	14
		Rural ...	806,696	1,736	1,573	1,654	1,684	1,791	1,843	2,225	2,125	2,803	2,424	2,099	23,581	
		Total ...	818,736	1,738	1,574	1,657	1,687	1,796	1,849	2,237	2,132	2,805	2,428	2,104	23,637	
15	Manbhum District	Urban ...	56,393	70	54	65	66	59	52	93	79	64	66	51	779	15
		Rural ...	1,754,497	1,983	1,952	2,258	1,978	2,320	2,524	3,127	3,230	2,603	2,344	2,299	29,503	
		Total ...	1,810,890	2,053	2,006	2,323	2,044	2,379	2,576	3,220	3,309	2,667	2,410	2,350	30,282	
16	Singhbhum District	Urban ...	30,697	60	66	52	62	58	61	88	93	78	59	50	797	16
		Rural ...	899,105	997	910	1,068	1,189	955	996	1,191	1,330	1,159	1,052	1,030	12,883	
		Total ...	929,802	1,057	976	1,120	1,251	1,008	1,057	1,279	1,423	1,237	1,111	1,080	13,680	
	Total for the province	Urban ...	(a)1,336,393	1,250	1,029	1,348	1,399	1,365	1,765	1,997	1,633	1,468	1,450	1,431	17,539	
		Rural ...	31,035,041	56,188	41,144	49,220	53,863	57,272	58,665	73,744	72,424	71,222	67,285	69,869	727,226	
		Total ...	32,371,434	57,438	42,173	50,568	55,262	58,637	60,430	75,741	74,056	72,690	68,735	71,300	744,765	
	Ratio per 1,000 of population.	Urban ...	...	0·9	0·7	1·0	1·0	1·0	1·3	1·5	1·2	1·1	1·1	1·0	13·1	
		Rural ...	...	1·8	1·3	1·5	1·7	1·8	1·8	2·3	2·3	2·3	2·2	2·2	23·4	
		Total ...	...	1·8	1·3	1·5	1·7	1·8	1·8	2·3	2·3	2·2	2·1	2·2	23·0	

(a) Including cantonment population.

I—*contd.*

Annual Form No. IV.—Deaths registered according to [..]*icts of Bihar Province, during the year* 1939*—contd.*

No.	District.		Not exceeding one month. Male. Under one week.	Over one week.	Total.	Female. Under one week.	Over one week.	Total.	Over one month and not exceeding six months. Male.	Female.	Total.	Over six months and not exceeding twelve months. Male.	Female.	Total.	Total male columns 3, 8 and 11.	Total female columns 6, 9 and 12.	Total.	No.
	2		1	2	3	4	5	6	8	9	10	11	12	13	14	15	16	
	PATNA DIVISION.																	
1	Patna district	Urban	54	31	85	31	38	69	44	60	104	49	44	93	178	173	351	1
		Rural	1,304	933	2,237	1,098	698	1,796	1,651	1,391	3,042	962	908	1,870	4,784	4,051	8,835	
		Total	1,358	964	2,322	1,129	736	1,865	1,695	1,451	3,146	1,011	952	1,963	4,962	4,224	9,186	
2	Gaya district	Urban	171	87	258	106	76	182	152	103	255	96	93	189	506	378	884	
		Rural	3,045	1,163	4,208	2,477	1,033	3,510	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
		Total	3,216	1,250	4,466	2,583	1,109	3,692	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
3	Shahabad district	Urban	19	6	25	17	9	26	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
		Rural	4,326	768	5,094	3,121	626	3,747	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
		Total	4,345	774	5,119	3,138	635	3,773	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
	TIRHUT DIVISION.																	
4	Saran district	Urban	33	31	64	17	12	29	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
		Rural	1,555	760	2,315	1,071	587	1,658	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
		Total	1,588	791	2,379	1,088	599	1,687	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
5	Champaran district	Urban	12	2	14	4	2	6	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	30	27	57	5
		Rural	2,023	586	2,609	1,663	433	2,096	1,248	1,041	2,289	864	641	1,505	4,721	3,778	8,499	
		Total	2,035	588	2,623	1,667	435	2,102	1,256	1,054	2,310	872	649	1,521	4,751	3,805	8,556	
6	Muzaffarpur district	Urban	45	15	60	37	13	50	34	26	60	37	53	90	131	129	260	6
		Rural	1,318	697	2,015	1,019	580	1,599	1,597	1,464	3,061	924	882	1,806	4,536	3,945	8,481	
		Total	1,363	712	2,075	1,056	593	1,649	1,631	1,490	3,121	961	935	1,896	4,667	4,074	8,741	
7	Darbhanga district	Urban	59	19	78	38	26	64	60	59	119	28	29	57	166	152	318	7
		Rural	2,172	611	2,783	1,671	463	2,134	1,561	1,382	2,943	918	837	1,755	5,262	4,353	9,615	
		Total	2,231	630	2,861	1,709	489	2,198	1,621	1,441	3,062	946	866	1,812	5,428	4,505	9,933	
	BHAGALPUR DIVISION.																	
8	Monghyr district	Urban	49	22	71	26	16	42	44	33	77	42	43	85	157	118	275	8
		Rural	1,314	762	2,076	1,086	576	1,662	1,616	1,463	3,079	1,102	976	2,078	4,794	4,101	8,895	
		Total	1,363	784	2,147	1,112	592	1,704	1,660	1,496	3,156	1,144	1,019	2,163	4,951	4,219	9,170	
9	Bhagalpur district	Urban	12	8	20	12	5	17	17	16	33	18	9	27	55	42	97	9
		Rural	1,057	492	1,549	847	351	1,198	1,066	1,175	2,241	773	540	1,313	3,388	2,913	6,301	
		Total	1,069	500	1,569	859	356	1,215	1,083	1,191	2,274	791	549	1,340	3,443	2,955	6,398	
10	Purnea district	Urban	25	13	38	17	10	27	18	4	22	5	3	8	61	34	95	
		Rural	1,237	628	1,865	906	523	1,429	1,747	1,451	3,198	751	580	1,331	4,363	3,460	7,823	
		Total	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1,456	1,765	1,455	3,220	756	583	1,339	4,424	3,494	[illegible]	
11	Santal Parganas district	Urban	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	4	3	7	1	...	1	12	[illegible]	[illegible]	1
		Rural	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	644	557	1,201	388	389	[illegible]	[illegible]	[illegible]	[illegible]	
		Total	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	648	560	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	

I—*contd.*

Annual Form No. IV.—Deaths registered according to ...icts of Bihar Province, during the year 1939—contd.

The following corrected figures should be read at page 66 of the Annual Public Health Report of Bihar for 1939 :—

CORRECTION SLIP NO. 2.

	Column 1.	Column 3.	Column 4.	Column 5.	Column 6.	Column 7.
Total for the Province ... Rural ...	23,500	33,030	18,088	7,698	25,786	58,816
Total ...	24,085	33,827	18,426	7,912	26,348	60,175

2 District.	Not exceeding one month. Male. Under one week.	Over one week.	Total.	Female. Under one week.	Over one week.	Total.	...er one month and not exceeding six months. ...ale.	Female.	Total.	Over six months and not exceeding twelve months. Male.	Female.	Total.	Total male columns 3, 8 and 11.	Total female columns 6, 9 and 12.	Total.	N...
	1	2	3	4	5	6	...8	9	10	11	12	13	14	15	16	
Urban							15	12	27	7	9	16	34	30	64	12
Rural							...924	699	1,623	388	387	775	2,569	2,052	4,621	
Total							...939	711	1,650	395	396	791	2,603	2,082	4,685	
Urban							14	10	24	4	6	10	34	26	60	13
Rural							...930	684	1,614	458	408	866	2,752	2,184	4,936	
Total							...944	694	1,638	462	414	876	2,786	2,210	4,996	
Urban							1	...	1	1	4	5	3	4	7	14
Rural							...656	569	1,225	392	395	787	2,354	2,072	4,426	
Total							...657	569	1,226	393	399	792	2,357	2,076	4,433	
15 Manbhum district ... Urban ...	15	5	20	10	6	16	14	5	19	16	12	28	50	33	83	15
Rural ...	652	382	1,034	504	247	751	...628	464	1,092	298	219	517	1,960	1,434	3,394	
Total ...	667	387	1,054	514	253	767	...642	469	1,111	314	231	545	2,010	1,467	3,477	
16 Singhbhum district ... Urban ...	16	11	27	6	5	11	14	8	22	15	10	25	56	29	85	16
Rural ...	273	102	375	243	77	320	...290	260	550	142	128	270	807	708	1,515	
Total ...	289	113	402	249	82	331	...304	268	572	157	138	295	863	737	1,600	
Total for the Province ... Urban ...	535	262	797	338	224	562	...493	405	898	380	368	748	1,670	1,335	3,005	
Rural ...	23,566	9,530	33,096	18,253	7,577	25,830	...,936	17,217	37,153	12,430	10,640	23,070	65,396	53,643	119,039	
Total ...	24,101	9,792	33,893	18,591	7,801	26,393	...,429	17,622	38,051	12,810	11,008	23,818	67,066	54,978	122,044	
Total population for the province ...	...	...	..	...	...	...		...	...	...	...	...	389,476	396,266	785,742	
Ratio per 1,000 of population ...	...	...	...	...	...	...		...	...	...	...	...	172·3	138·8	155·4	

Annual Form No. IV.—Deaths registered according t[illegible] *[dist]ricts of Bihar Province, during the year* 1939—contd.

No.	District		1 year and under 5 years: Male.	1 year and under 5 years: Female.	5 years and under 10 years: Male.	5 years and under 10 years: Female.	10 years and under 15 years: Male.	10 years and under 15 years: Female.	15 years and under 20 years: Male.
1	2		3		4		5		6
			17	18	19	20	21	22	23
	PATNA DIVISION.								
1	Patna district ...	Urban ...	146	104	94	91	97	91	100
		Rural ...	3,883	3,963	942	880	523	394	391
		Total ..	4,029	4,067	1,036	971	620	485	491
2	Gaya district ...	Urban ...	353	294	81	61	41	44	59
		Rural ...	6,675	6,930	1,665	1,477	892	659	[illegible]
		Total ...	7,028	7,224	1,746	1,538	933	703	824
3	Shahabad district ...	Urban ...	54	44	13	8	11	7	9
		Rural ...	4,398	4,439	1,129	924	552	431	551
		Total ...	4,452	4,483	1,142	932	563	438	560
	TIRHUT DIVISION.								
4	Saran district ..	Urban ...	97	72	41	35	40	29	35
		Rural ...	4,560	4,089	1,510	1,346	983	763	1,033
		Total ...	4,657	4,161	1,551	1,381	1,023	792	1,068
5	Champaran district ...	Urban ...	30	34	10	13	11	7	18
		Rural ...	4,355	3,702	1,235	1,062	688	445	682
		Total ...	4,385	3,736	1,245	1,075	699	452	700
6	Muzaffarpur district ...	Urban ...	104	75	74	58	41	27	52
		Rural ...	7,677	6,931	2,512	1,987	1,358	831	928
		Total ...	7,781	7,006	2,586	2,045	1,399	858	980
7	Darbhanga district ...	Urban ...	156	131	57	44	35	24	35
		Rural ...	7,192	6,490	2,998	2,294	1,700	1,111	1,342
		Total ...	7,348	6,621	3,055	2,338	1,735	1,135	1,377
	BHAGALPUR DIVISION.								
8	Monghyr district ...	Urban ...	145	146	46	26	24	26	18
		Rural ...	6,560	6,440	1,897	1,399	1,006	750	814
		Total ...	6,705	6,586	1,943	1,425	1,030	776	83[illegible]
9	Bhagalpur district ...	Urban ...	60	49	31	11	17	20	22
		Rural ...	4,768	4,456	2,357	1,768	1,515	995	1,041
		Total ...	4,828	4,505	2,388	1,779	1,532	1,015	1,063
10	Purnea district ...	Urban ...	64	40	30	31	20	26	29
		Rural ...	5,302	4,698	2,533	1,938	1,440	1,038	1,231
		Total ..	5,366	4,738	2,563	1,969	1,460	1,064	1,260
11	Santal Parganas district ...	Urban ...	8	10	...	7	11	6	4
		Rural ...	2,988	2,508	1,585	[illegible]	[illegible]	[illegible]	[illegible]
		Total ...	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

District		20 years and under 30 years: Male.	20 years and under 30 years: Female.	30 years and under 40 years: Male.	30 years and under 40 years: Female.	40 years and under 50 years: Male.	40 years and under 50 years: Female.	50 years and under 60 years: Male.	50 years and under 60 years: Female.	60 years and upwards: Male.	60 years and upwards: Female.	No.
		7		8		9		10		11		12
		25	26	27	28	29	30	31	32	33	34	
Patna district	Urban	119	116	124	112	126	116	132	107	213	222	1
	Rural	1,164	1,351	1,153	1,239	1,489	979	1,655	1,324	4,154	4,246	
	Total	1,283	1,467	1,277	1,351	1,565	1,095	1,787	1,431	4,367	4,468	
Gaya district	Urban	170	208	166	158	162	100	148	115	390	416	2
	Rural	2,180	2,577	2,154	2,034	2,253	1,840	2,570	2,358	5,084	5,412	
	Total	2,350	2,785	2,320	2,192	2,415	1,940	2,718	2,473	5,474	5,828	
Shahabad district	Urban	37	31	33	27	26	17	30	16	67	66	3
	Rural	[illegible],938	2,559	1,787	1,854	1,635	1,389	1,763	1,705	3,561	4,583	
	Total	[illegible],975	2,590	1,820	1,881	1,661	1,406	1,793	1,721	3,628	4,649	
Saran district	Urban	78	72	78	85	78	60	51	48	226	216	4
	Rural	[illegible],416	2,348	2,405	2,067	2,196	1,808	2,422	2,308	6,239	6,437	
	Total	[illegible],494	2,420	2,483	2,152	2,274	1,868	2,473	2,356	6,465	6,658	
Champaran district	Urban	39	34	35	23	27	6	16	10	23	16	5
	Rural	[illegible],186	1,937	2,459	1,866	2,442	1,773	2,555	2,030	3,669	3,513	
	Total	[illegible],225	1,971	2,494	1,889	2,469	1,779	2,571	2,040	3,692	3,529	
Muzaffarpur district	Urban	100	75	85	66	60	43	78	39	78	90	6
	Rural	[illegible],049	2,235	3,599	2,356	3,464	2,276	3,826	3,467	5,314	6,296	
	Total	[illegible],149	2,310	3,684	2,422	3,524	2,319	3,904	3,506	5,392	6,386	
Darbhanga district	Urban	78	75	102	79	108	52	67	43	110	103	7
	Rural	[illegible],598	3,118	3,680	2,990	3,246	2,698	3,364	3,297	4,317	4,839	
	Total	[illegible],676	3,193	3,782	3,069	3,354	2,750	3,431	3,340	4,427	4,942	
Monghyr district	Urban	33	52	37	21	43	23	36	29	100	88	8
	Rural	[illegible],930	1,975	2,146	1,740	2,198	1,643	2,917	2,619	4,510	4,895	
	Total	[illegible]	2,027	2,183	1,761	2,241	1,666	2,953	2,648	4,610	4,978	
Bhagalpur district	Urban	42	45	54	26	47	21	37	20	72	83	9
	Rural	[illegible],761	2,899	2,885	2,513	2,633	2,113	2,406	2,405	3,999	3,693	
	Total	[illegible],803	2,944	2,939	2,539	2,680	2,134	2,443	2,425	4,071	3,726	
Purnea district	Urban	48	51	64	48	40	33	53	29	39	31	10
	Rural	[illegible],498	3,934	3,694	3,216	3,259	2,235	2,485	1,890	3,076	2,501	
	Total	[illegible],546	3,985	3,758	3,264	3,299	2,268	2,538	1,919	3,115	2,532	
Santal Parganas district	Urban	13	6	9	14	17	6	8	5	[illegible]	[illegible]	
	Rural	[illegible],199	2,174	2,329	1,890	2,091	1,536	[illegible]	[illegible]	[illegible]	[illegible]	
	Total	[illegible],212	2,180	2,338	1,904	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	

APP[illegible]IX I—contd.

Annual Form No. IV.—Deaths registered according to age in [illegible]istricts of Bihar Province during the year 1939—concld.

	3		4		5		6		7		8		9		10		[illegible]
	1 year and under 5 years.		5 years and under 10 years.		10 years and under 15 years.		15 years and under 20 years.		20 years and under 30 years.		30 years and under 40 years.		40 years and under 50 years.		50 years and under 60 years.		60 ye[illegible] upw[illegible]
	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.
	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33
IVISION.																	
Urban ...	26	29	11	10	4	5	3	[illegible]	11	17	12	11	21	10	9	17	21
Rural ...	3,577	3,372	1,329	1,283	790	661	756	[illegible]	1,645	1,587	1,667	1,450	1,708	1,192	1,728	1,539	1,938
Total ...	3,603	3,401	1,340	1,293	794	666	759	[illegible]	1,656	1,604	1,679	1,461	1,729	1,202	1,737	1,556	1,959
Urban ...	42	33	14	18	11	13	11	[illegible]	25	38	26	112	20	12	30	12	62
Rural ...	4,804	4,034	1,348	1,094	937	726	886	[illegible]	1,779	1,844	1,766	1,377	1,703	1,294	2,253	2,204	2,187
Total ...	4,846	4,067	1,362	1,112	948	739	897	[illegible]	1,804	1,882	1,792	1,388	1,723	1,306	2,283	2,216	2,249
Urban ...	11	4	3	...	1	1	1	...	3	3	3	1	5	1	2	3	3
Rural ...	2,992	2,862	926	734	431	336	307	[illegible]	1,036	1,045	1,048	896	1,022	776	1,014	950	1,278
Total ...	3,003	2,866	929	734	432	337	308	[illegible]	1,039	1,048	1,051	897	1,027	777	1,016	953	1,281
Urban ...	57	37	24	21	24	20	32	[illegible]	57	44	71	46	58	30	44	18	49
Rural ...	2,030	1,911	1,118	903	873	548	1,066	[illegible]	1,964	1,741	2,017	1,456	1,765	1,111	1,616	1,166	2,053
Total ...	2,087	1,948	1,142	924	897	568	1,098	[illegible]	2,021	1,785	2,088	1,502	1,823	1,141	1,660	1,184	2,102
Urban ...	45	40	36	20	24	9	18	[illegible]	81	73	72	39	74	21	39	22	37
Rural ...	1,302	1,164	506	461	301	202	327	[illegible]	721	647	857	551	790	472	754	587	711
Total ...	1,347	1,204	542	481	325	211	345	[illegible]	802	720	929	590	864	493	793	609	748
Urban ...	1,398	1,142	565	454	412	355	446	[illegible]	934	940	971	767	912	551	780	533	1,499
Rural ...	73,063	67,989	25,540	20,906	15,074	10,731	13,343	[illegible]	34,064	32,971	35,646	29,495	33,844	25,135	35,120	31,266	54,711
Total ...	74,461	69,131	26,105	21,360	15.486	11,036	13,789	[illegible]	34,998	34,911	36,617	30,262	34,756	25,686	35,900	31,799	56,210
rovince ...	1,996,260	2,110,112	2,330,522	2,129,096	2,005,728	1,767,032	1,322,530	1,3[illegible]	2,763,352	2,894,276	2,341,958	2,314,501	1,595,753	1,513,295	904,766	913,225	594,542
tion ...	37·3	32·7	11·2	10·0	7·7	6·2	10·4	[illegible]	12·6	11·7	15·6	13·7	21·8	16·9	39·6	34·8	94·6

APPENDIX I—*contd.*

Annual form No. IVA.—Deaths under one year registered according to class in each town and rural areas in the districts of Bihar Province during the year 1939—contd.

1	2			3			4			5			6			7		
Registering circle.	Christians.			Hindus.			Muhammadans.			Buddhists.			Other classes.			Total.		
—	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
PATNA.																		
Patna town	...	...	...	101	102	203	21	20	41	...	...	...	...	...	...	122	122	244
Bihar town	...	...	...	35	36	71	...	...	...	...	...	...	...	...	...	35	36	71
Dinapur Nizamat...	...	...	...	2	3	5	...	...	...	...	...	...	...	...	...	2	3	5
Dinapur Cantonment	...	...	...	6	2	8	2	...	2	...	...	...	...	...	...	8	2	10
Barh town	...	...	...	7	2	9	...	...	...	...	...	...	...	...	...	7	2	9
Khagole town	...	...	...	3	6	9	1	2	3	...	...	...	...	...	...	4	8	12
Total of towns ...	...	...	...	154	151	305	24	22	46	...	...	...	...	...	...	178	173	351
Total of rural ...	...	...	...	4,602	3,917	8,519	182	134	316	...	...	...	...	...	...	4,784	4,051	8,835
Total of district ...	...	...	...	4,756	4,068	8,824	206	156	362	...	...	...	...	...	...	4,962	4,224	9,186
GAYA.																		
Gaya town	...	...	...	377	298	675	70	53	123	...	...	...	...	...	...	447	351	798
Tikari town	...	...	...	20	5	25	...	...	...	...	...	...	...	...	...	20	5	25
Daudnagar town	...	...	...	38	22	60	1	...	1	...	...	...	...	...	...	39	22	61
Total of towns ...	...	...	...	435	325	760	71	53	124	...	...	...	...	...	...	506	378	884
Total of rural ...	...	...	...	7,913	6,850	14,763	546	461	1,007	...	...	...	...	...	...	8,459	7,311	15,770
Total of district ...	...	...	...	8,348	7,175	15,523	617	514	1,131	...	...	...	...	...	...	8,965	7,689	16,654
SHAHABAD.																		
Arrah town	...	...	...	15	6	21	1	3	4	...	...	...	...	...	...	16	9	25
Buxar town	...	...	...	8	12	20	...	...	...	...	...	...	...	...	...	8	12	20
Dumraon town	...	...	...	5	1	6	...	...	...	...	...	...	...	...	...	5	1	6
Jagadispur town	...	...	...	2	1	3	...	...	...	...	...	...	...	...	...	2	1	3
Sasaram town	...	...	...	12	19	31	6	7	13	...	...	...	...	...	...	18	26	44
Bhabua town	...	...	...	5	8	13	...	...	...	...	...	...	...	...	...	5	8	13
Total of towns ...	...	...	...	47	47	94	7	10	17	...	...	...	...	...	...	54	57	111
Total of rural ...	...	...	...	7,616	5,867	13,483	190	139	329	...	...	...	...	...	...	7,806	6,006	13,812
Total of district ...	...	...	...	[illegible]	[illegible]	[illegible]577	197	149	346	...	...	...	...	...	...	7,860	6,063	13,923

No. *IVA.—Deaths under one year registered according to class in each town and rural areas in the districts of Bihar Province during the year* **1939—contd.**

	2			3			4			5			6			7	
rcle.	Christians.			Hindus.			Muhammadans.			Buddhists.			Other classes.			Total.	
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female
... ...	...	...	...	66	46	112	20	8	28	...	...	...	...	...	...	85	5
... ...	...	...	...	31	23	54	2	1	3	...	...	...	...	...	...	34	2
... ...	...	...	...	21	17	38	2	1	3	...	...	...	...	...	...	23	1
wns ...	...	...	...	118	86	204	24	10	34	...	...	...	...	...	...	142	9
ral ...	...	...	...	3,806	2,918	6,724	994	697	1,691	...	...	-	...	...	...	4,800	3,61
rict ...	...	...	...	3,924	3,004	6,928	1,018	707	1,725	...	...	...	...	...	...	4,942	3,71
... ...	5	4	9	15	10	25	4	5	9	...	...	...	...	...	...	24	1
... ...	...	...	...	3	3	6	3	5	8	...	...	...	...	...	...	6	
wns ...	5	4	9	18	13	31	7	10	17	...	...	...	...	...	...	30	2
ural ...	2	...	2	4,077	3,271	7,348	642	507	1,149	...	...	...	...	...	...	4,721	3,77
trict ...	7	4	11	4,095	3,284	7,379	649	517	1,166	...	...	...	...	...	...	4,751	3,80
PUR.																	
... ...	...	...	...	39	34	73	7	6	13	...	...	...	...	...	...	46	40
... ...	...	...	...	25	26	51	...	...	...	...	...	...	...	...	...	25	26
... ...	...	...	...	35	33	68	9	10	19	...	...	...	...	...	...	44	43
... ...	...	...	...	16	20	36	...	...	...	...	...	...	...	...	...	16	20
... ...	...	...	...	115	113	228	16	16	32	...	...	...	...	...	...	131	129
... ...	...	..	...	3,701	3,214	6,915	835	731	1,566	...	...	...	..	...	...	4,536	3,945
... ...	...	...	...	3,816	3,327	7,143	851	747	1,598	...	...	...	...	...	...	4,667	4,074
... ...	...	...	...	112	108	220	3	3	6	...	...	...	...	...	...	115	111
... ...	...	...	...	10	9	19	...	...	...	...	...	...	...	...	...	10	9
... ...	...	...	...	15	12	27	...	1	1	...	...	...	...	...	...	15	13
... ...	...	...	...	24	18	42	2	1	3	...	...	...	...	...	...	26	19
			...	161	147	308											

APPENDIX I—*contd.*

Annual form No. IVA.—Deaths under one year according to class in each town and rural areas in the districts of Bihar Province during the year 1939—contd.

1	2			3			4			5			6			7		
	Christians.			Hindus.			Muhammadans.			Buddhists.			Other classes.			Total.		
Registering circle.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
MONGHYR.																		
Monghyr town ...	...	...	...	66	54	120	13	12	25	...	...	...	...	...	...	79	66	145
Jamalpur town ...	...	...	...	70	48	118	8	4	12	...	...	...	...	...	...	78	52	130
Total of towns ...	...	...	...	136	102	238	21	16	37	...	...	...	...	...	...	157	118	275
Total of rural ...	...	...	...	3,781	3,274	7,055	1,013	827	1,840	...	...	...	...	...	...	4,794	4,101	8,895
Total of district ...	...	...	...	3,917	3,376	7,293	1,034	843	1,877	...	...	...	...	...	...	4,951	4,219	9,170
BHAGALPUR.																		
Bhagalpur town ...	...	...	...	42	34	76	3	...	3	...	...	...	...	...	...	45	34	79
Colgong town ...	...	...	...	10	8	18	...	...	...	...	...	...	...	...	...	10	8	18
Total of towns ...	...	...	...	52	42	94	3	...	3	...	...	...	...	...	...	55	42	97
Total of rural ...	...	...	...	2,768	2,203	4,971	620	710	1,330	...	...	...	...	...	...	3,388	2,913	6,301
Total of district ...	...	...	...	2,820	2,245	5,065	623	710	1,333	...	...	...	...	...	...	3,443	2,955	6,398
PURNEA.																		
Purnea town ...	...	...	...	18	11	29	8	1	9	...	...	...	...	...	...	26	12	38
Kishenganj town ...	...	...	...	4	2	6	2	3	5	...	...	...	...	...	...	6	5	11
Katihar town ...	...	...	...	19	12	31	5	5	10	...	...	...	...	...	...	24	17	41
Forbesganj town ...	...	...	...	4	...	4	1	...	1	...	...	...	...	...	...	5	...	5
Total of towns ...	...	...	...	45	25	70	16	9	25	...	...	...	...	...	...	61	34	95
Total of rural ...	...	...	...	2,570	2,076	4,646	1,793	1,384	3,177	...	...	...	...	...	...	4,363	3,460	7,823
Total of district ...	...	...	...	2,615	2,101	4,716	1,809	1,393	3,202	...	...	...	...	...	...	4,424	3,494	7,918
SANTAL PARGANAS.																		
Sahibganj town ...	...	...	...	4	1	5	...	...	...	...	...	...	1	...	1	5	1	6
Deoghar town ...	...	...	...	5	4	9	...	...	...	...	...	...	...	...	...	5	4	9
Dumka town ...	...	...	...	2	2	4	...	...	...	...	...	...	...	...	...	2	2	4
Madhupur town ...	...	...	...	1	...	1	...	...	...	...	...	...	...	...	...	1	...	1
Total of towns ...	...	...	...	12	7	19	...	...	...	...	...	...	1	...	1	13	7	20
Total of rural ...	...	...	...	1,374	1,090	2,464	101	83	184	...	...	...	566	487	1,053	2,041	1,660	3,701
Total of district ...	...	...	...	1,386	1,096	2,482	101	83	184	...	...	...	567	487	1,054	2,054	1,667	3,721
HAZARIBAGH.																		
Hazaribagh town	...	...	...	11	15	26	2	...	2	...	...	...	...	...	...	13	15	28
Chatra " ...	...	...	...	12	10	22	1	...	1	...	...	...	...	...	...	13	10	23
Giridih " ...	...	...	...	8	3	11	...	2	2	...	...	...	...	...	...	8	5	13
Total of towns ...	...	...	...	31	28	59	3	2	5	...	...	...	...	...	...	34	30	64
Total of rural ...	...					4,324	168	128	296	...	...	...	...	...	...	2,569	2,052	4,621

APPENDIX I—*contd.*

Annual form No. IVA.—Deaths under one year registered according to class in each town and rural areas in the districts of Bihar Province during the year 1939—concld.

1	2			3			4			5			6			7		
Registering circle.	Christians.			Hindus.			Muhammadans.			Buddhists.			Other classes.			Total.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
RANCHI.																		
Ranchi town	1	1	2	19	15	34	9	8	17	...	...	...	...	...	...	29	24	53
Lohardaga "	5	2	7	...	...	...	...	...	...	...	...	...	...	...	...	5	2	7
Total of towns	6	3	9	19	15	34	9	8	17	...	...	...	...	...	...	34	26	60
Total of rural	485	391	876	934	715	1,649	121	99	220	...	...	...	1,212	979	2,191	2,752	2,184	4,936
Total of district	491	394	885	953	730	1,683	130	107	237	...	...	...	1,212	979	2,191	2,786	2,210	4,996
PALAMAU.																		
Daltonganj town...	...	...	...	3	4	7	...	...	...	...	...	...	...	...	...	3	4	7
Total of rural	7	8	15	2,180	1,915	4,095	167	149	316	...	...	...	...	...	...	2,354	2,072	4,426
Total of district	7	8	15	2,183	1,919	4,102	167	149	316	...	...	...	...	...	...	2,357	2,076	4,433
MANBHUM.																		
Purulia town	...	...	...	15	11	26	...	2	2	...	...	...	...	...	...	15	13	28
Raghunathpur town	...	...	...	7	2	9	...	...	...	...	...	...	2	...	2	9	2	11
Jhalda town	...	...	...	7	4	11	...	...	...	...	...	...	...	...	...	7	4	11
Dhanbad town	...	...	...	15	12	27	4	2	6	...	...	...	...	...	...	19	14	33
Total of towns	...	...	...	44	29	73	4	4	8	...	...	...	2	...	2	50	33	83
Total of rural	2	3	5	1,838	1,339	3,177	48	38	86	...	...	...	72	54	126	1,960	1,434	3,394
Total of district	2	3	5	1,882	1,360	3,250	52	42	94	...	...	...	74	54	128	2,010	1,467	3,477
SINGHBHUM.																		
Chaibassa town	...	...	...	9	8	17	...	1	1	...	...	...	...	...	...	9	9	18
Chakradharpur town	...	...	...	3	3	6	2	...	2	...	...	...	...	...	...	5	3	8
Jugsalai town	...	...	...	6	3	9	1	...	1	...	...	...	...	...	...	7	3	10
Jamshedpur town	...	...	...	33	13	46	1	1	2	...	...	...	1	...	1	35	14	49
Total of towns	...	...	...	51	27	78	4	2	6	...	...	...	1	...	1	56	29	85
Total of rural	3	3	6	397	361	758	8	3	11	...	...	...	399	341	740	807	708	1,515
Total of district	3	3	6	448	388	836	12	5	17	...	...	...	400	341	741	863	737	1,600
PROVINCE.																		
Total of towns	11	7	18	[illegible]	[illegible]	2,602	214	167	331	...	...	...	4	...	4	1,670	1,335	3,005
Total of rural	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	8,132	6,609	14,741	...	...	...	2,249	1,861	4,110	65,396	[illegible]	[illegible]
Total of districts	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

APP[ENDI]X I—*contd.*

Annual Form No. V.—Deaths registered according to class in [dis]*tricts of Bihar Province during the year* 1939—contd.

3

Number of deaths registered.

	Christians. Male.	Christians. Female.	Christians. Total.	Hindus. Male.	Hindus. Female.	Hindus. Total.	Muhammadans. Male.	Muhammadans. Female.	Muhammadans. Total.	Buddhists. Male.	Buddhists. Female.	Buddhists. Total.	Other classes. Male.	Other classes. Female.	Other classes. [Total]
..	3	1	4	19,729	18,503	38,232	1,685	1,539	3,224	...	...	...	...	3	
...	1	...	1	31,589	30,082	61,671	3,178	3,103	6,281	...	...	...	5	...	
...	1	...	1	23,981	23,297	47,278	1,472	1,468	2,940	...	...	...	...	...	
V.															
...	...	1	1	26,003	23,547	49,550	3,427	2,837	6,264	...	...	...	...	...	
...	22	26	48	21,607	17,863	39,470	3,602	2,873	6,475	...	...	...	...	...	
...	4	7	11	32,742	28,263	61,005	4,320	3,527	7,847	...	...	...	...	...	
...	1	...	1	32,792	28,969	61,761	4,820	4,016	8,836	...	...	...	...	...	
I-															
...	11	9	20	27,004	24,590	51,594	2,396	2,247	4,643	...	...	...	...	...	
...	3	6	9	25,546	22,696	48,242	2,640	2,271	4,911	...	...	...	...	...	
...	8	3	11	18,378	15,489	33,859	12,929	10,895	23,824	...	...	...	14	13	
..	59	50	109	9,844	8,512	18,356	2,164	1,767	3,931	...	...	...	7,929	6,644	14
...	5	2	7	16,188	14,271	30,459	1,613	1,439	3,052	...	...	...	53	42	
..	2,530	2,359	4,889	6,519	5,543	12,062	676	612	1,288	...	...	...	10,965	9,330	20
.	115	115	230	11,341	10,250	21,591	987	829	1,816	..	...	...	...	...	
.	23	31	54	15,158	11,870	27,028	799	706	1,505	...	...	...	948	747	1,
.	557	52	109	3,837	2,950	6,787	121	64	185	...	...	...	3,543	3,056	6,
	2,843	2,662	5,505	322,258	286,695	608,945	46,829	40,193	87,022	...	...	...	23,458	19,835	43,

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Ratio of deaths per 1,000 of population.

Christians. Male.	Christians. Female.	Christians. Total.	Hindus. Male.	Hindus. Female.	Hindus. Total.	Muhammadans. Male.	Muhammadans. Female.	Muhammadans. Total.	Buddhists. Male.	Buddhists. Female.	Buddhists. Total.	Other classes. Male.	Other classes. Female.
1·5	0·7	1·3	23·1	23·5	23·3	16·6	15·1	15·9	...	...	...	...	4·3
3·3	...	1·7	29·3	28·4	28·9	27·0	22·8	22·0	...	...	...	9·9	...
0·9	...	0·4	25·9	25·5	25·7	20·1	18·8	19·4	...	...	...	...	...
..	5·6	2·1	24·3	21·3	22·7	23·2	17·6	20·2	...	...	...	...	...
13·1	18·2	13·1	23·9	20·2	22·1	20·5	16·1	18·3	...	...	...	...	...
8·3	17·2	12·4	26·0	21·9	23·9	23·3	17·1	20·1	...	...	...	...	...
3·5	...	1·9	24·2	21·1	22·7	22·3	17·9	20·1	...	...	...	...	...
10·4	10·5	10·4	26·2	24·1	25·1	21·9	18·8	20·3	...	...	...	...	...
8·4	8·8	5·8	25·5	23·2	24·7	21·0	18·3	19·7	..	...	...	0·5	...
8·2	3·5	6·0	27·6	24·9	26·3	28·3	25·3	26·9	...	...	...	2·3	2·1
9·1	7·2	8·2	20·6	17·9	19·3	19·2	15·9	17·5	...	...	...	18·4	15·3
2·9	1·4	2·2	27·1	23·4	25·2	19·0	16·5	17·8	...	...	...	0·8	0·6
9·4	17·8	18·6	15·0	12·7	13·9	20·0	18·9	19·5	...	...	...	60·9	49·3
27·1	26·3	26·7	33·8	30·6	32·2	26·4	22·3	24·3	...	...	...	...	...
5·8	8·3	7·1	18·4	15·4	16·9	12·9	14·2	13·5	...	...	...	18·8	15·3
5·7	5·5	5·6	16·2	13·3	14·7	7·3	6·3	6·9	...	...	...	17·3	14·0
17·1	15·9	16·6	24·7	22·3	23·1	22·7	18·9	20·8	...	...	...	23·9	19·7

Annual Form no. VA.—Death rates according to class, in urban and rural areas separately in each district of Bihar province during the year 1939.

Number.	Districts.		Christians.	Hindus.	Muhammadans.	Buddhists.	Other classes.	Total.
1	2		3	4	5	6	7	8
1	Patna ...	Urban ...	0·7	10·9	7·5	...	12·6	9·8
		Rural ...	2·6	24·9	20·0	...	...	24·5
2	Gaya ...	Urban ...	...	39·9	30·5	...	...	37·3
		Rural ...	14 9	23·6	24·1	...	12·3	28·0
3	Shahabad ...	Urban ...	...	5·0	6·2	...	...	5·3
		Rural ...	0 5	26·7	22·8	...	...	26·4
4	Saran ...	Urban ...	11·6	25·0	16·9	...	...	22·8
		Rural ...	...	22·7	20·5	...	...	22·0
5	Champaran ...	Urban ...	20·9	8·6	9·0	...	...	9·2
		Rural ...	5·4	22·3	18·6	...	...	21·7
6	Muzaffarpur ...	Urban ...	1·8	18·8	13·3	...	...	17·4
		Rural ...	12·7	24·6	20·4	...	...	23·5
7	Darbhanga ...	Urban ...	...	18·8	11·3	...	...	16·7
		Rural ...	6·5	22·8	20·6	...	...	22·5
8	Monghyr ...	Urban ...	3·03	14·5	14·5	...	...	14·3
		Rural ...	10·4	26·7	25·5	...	...	24·9
9	Bhagalpur ...	Urban ...	1·3	9·4	5·4	...	...	8·1
		Rural ...	10.2	24·8	21·3	...	0·3	24·4
10	Purnea ...	Urban ...	6·4	16·1	19·3	...	7·6	17·1
		Rural ...	5·9	26·6	27·0	...	2·0	26·6
11	Santal Parganas	Urban ...	3·9	3·6	2·5	...	15·1	3·5
		Rural ...	8·4	20·0	18·1	...	16·8	18·3
12	Hazaribagh ...	Urban ...	...	7·4	4·2	...	...	6 3
		Rural ...	3·3	25 8	18·9	...	0·7	22·7
13	Ranchi ...	Urban ...	3·8	10·8	8·4	...	2·0	8·6
		Rural ...	19·1	13·9	22·5	...	55·5	25·2
14	Palamau ...	Urban ...	...	4·7	4·6	...	...	4·6
		Rural ...	27·2	32·6	25·0	...	...	29·2
15	Manbhum ...	Urban ...	5·9	14·0	13·0	...	212·8	13·8
		Rural ...	7·4	17·0	13·5	...	16·9	16·8
16	Singhbhum ...	Urban ...	5·5	7·8	4·9	...	3·6	6·9
		Rural ...	5·6	16·2	12·3	...	15·8	15·8
	Total for the Province ...	Urban ...	5·2	15·1	11.17	...	6·8	11·6
		Rural ...	17·4	22·9	21·6	...	22·2	23·4

STATEMENT No. VI.

APP… IX I—*contd.*

Annual Form No. VI.—Deaths registered from different causes in t… stricts and towns of Bihar Province, during the year 1939—contd.

Districts and Towns. (2)	Population according to census of 1931. (3) Male.	Female.	Total.	Births. (4) Male.	Female.	Total.	Birth rates. (5) Male.	Female.	Total.	Cholera. (6)	Small-pox. (7)	Plague. (8)	Fevers. (9)	Dysentery and diarrhœa. (10)	Respiratory diseases. (11)
DISTRICTS EXCLUDING TOWNS.															
…ATNA DIVISION.															
…tna ...	611,800	776,390	1,588,190	29,952	28,517	58,469	18·9	16·0	36·9	1,119	138	...	26,572	729	[illegible]
…ya ...	1,134,074	1,149,203	2,263,277	53,397	51,931	105,328	23·4	22·7	46·1	645	542	...	50,930	87	[illegible]
…ahabad	936,948	938,911	1,875,859	40,696	37,321	78,017	21·7	19·9	41·6	3,613	845	49	35,696	24	[illegible]
…RHUT DIVISION.															
…ran ...	1,181,847	1,234,146	2,415,993	45,150	42,593	87,743	18·7	17·6	36·3	996	1,003	1,419	32,042	303	[illegible]
…hamparan	1,055,771	1,044,430	2,100,201	36,037	34,160	70,197	17·1	16·3	33·4	288	600	44	38,430	165	[illegible]
…uzaffarpur	1,397,930	1,460,854	2,858,784	50,509	47,571	98,080	17·7	16·6	34·3	303	457	263	60,657	128	[illegible]
…arbhanga	1,518,105	1,549,764	3,067,869	51,831	49,320	101,151	16·9	16·0	32·9	109	757	...	60,977	141	[illegible]
BHAGALPUR DIVISION.															
…onghyr	1,101,576	1,102,369	2,203,945	39,915	37,074	76,989	18·1	16·8	34·9	1,583	1,365	...	43,411	94	[illegible]
Bhagalpur	1,081,084	1,064,468	2,145,552	35,226	32,648	67,874	16·4	15·2	31·6	1,877	670	55	44,838	86	[illegible]
Purnea ...	1,101,882	1,038,438	2,140,320	33,581	31,119	64,700	15·7	14·5	30·2	2,257	190	...	50,075	68	[illegible]
Santal Parganas ...	998,960	1,003,976	2,002,936	22,241	21,426	43,667	11·1	10·7	21·8	1,903	210	...	32,026	122	[illegible]
CHOTA NAGPUR DIVISION.															
…azaribagh	725,619	740,881	1,466,500	25,178	24,278	49,456	17·2	16·6	33·7	913	252	...	28,099	63	[illegible]
…anchi ...	746,330	762,726	1,509,056	24,143	23,384	47,527	15·9	15·5	31·5	109	45	...	31,652	1,139	[illegible]
…alamau	403,177	403,519	806,696	17,306	16,427	33,733	21·4	22·4	41·8	106	391	...	19,445	27	[illegible]
…anbhum	908,615	845,882	1,754,497	24,667	23,004	47,671	14·1	13·1	27·2	349	312	...	26,432	91	[illegible]
…nghbhum	401,278	414,089	815,367	10,411	10,412	20,823	12·8	12·8	25·3	45	13	...	11,485	68	[illegible]
…otal for the province.	15,504,995	15,530,046	31,035,041	540,240	511,185	1,051,425	17·4	16·5	33·9	16,305	7,790	1,830	593,667	3,330	[illegible]
TOWNS.															
PATNA DISTRICT.															
…tna City	92,288	67,452	159,690	1,439	1,171	2,610	9·0	7·8	16·3	30	49	...	585	228	[illegible]
…har ...	24,532	22,462	46,994	300	291	591	6·4	6·2	12·6	4	5	...	181	25	[illegible]
…napore	12,347	11,874	24,221	29	30	59	1·2	1·2	2·4	11	...	...	14	2	[illegible]
…h ...	5,179	4,571	9,750	60	52	112	6·1	5·3	11·4	22	...	...	26	4	[illegible]
…agole	4,119	3,293	7,412	50	45	95	6·7	6·1	12·8	...	1	...	24	1	[illegible]
…AYA DISTRICT.															
…a ...	50,625	37,380	88,005	1,537	1,441	2,978	17·4	16·4	33·8	51	3	...	1,859	144	[illegible]
…ari ...	2,687	2,794	5,481	114	109	223	20·8	19·8	40·6	8	...	...	94	...	[illegible]
…adnagar	6,257	5,443	11,699	202	182	384	17·3	15·5	32·8	4	...	...	177	5	[illegible]

Districts and Towns.	Injuries. (12) Suicide. Male.	Suicide. Female.	Wounds or accidents.	Snake-bite or killed by wild animals.	Rabies.	Total.	All other causes. (13)	Total deaths from all causes. (14) Male.	Female.	Total.
DISTRICTS EXCLUDING TOWNS.										
…ATNA DIVISION.										
…tna ...	[illegible]	107	146	211	10	531	8,079	20,088	18,823	38,911
…ya ...	[illegible]	50	136	228	1	455	11,342	32,697	31,334	64,031
…ahabad	[illegible]	35	106	154	4	334	9,019	25,120	24,478	49,598
…RHUT DIVISION.										
…ran ...	[illegible]	93	311	411	10	893	16,649	28,564	25,640	54,204
…hamparan	[illegible]	15	126	266	...	417	5,605	24,992	20,580	45,572
…uzaffarpur	[illegible]	20	214	178	3	441	5,034	36,263	31,165	67,428
…arbhanga	[illegible]	13	602	563	3	1,204	5,718	33,699	33,259	68,958
BHAGALPUR DIVISION.										
…onghyr	[illegible]	30	159	388	6	601	7,081	28,772	26,295	55,067
Bhagalpur	[illegible]	20	91	212	11	362	4,534	27,753	24,686	52,439
Purnea ...	[illegible]	38	75	230	2	450	3,969	30,881	26,050	56,931
Santal Parganas ...	[illegible]	29	74	129	8	275	2,061	19,904	16,891	36,795
CHOTA NAGPUR DIVISION.										
…azaribagh	[illegible]	41	133	84	1	287	3,641	17,707	15,585	33,292
…anchi ...	[illegible]	27	147	163	5	382	4,615	20,415	17,618	38,033
…alamau	[illegible]	33	82	109	3	236	3,316	12,408	11,173	23,581
…anbhum	[illegible]	28	212	60	5	327	1,869	16,462	13,041	29,503
…nghbhum	[illegible]	25	17	91	1	167	1,104	7,076	5,807	12,883
…otal for the province.	[illegible]	624	2,631	3,491	73	7,362	94,471	385,801	341,425	727,226
TOWNS.										
PATNA DISTRICT.										
…tna City	[illegible]	...	78	6	...	84	793	1,027	946	1,973
…har ...	[illegible]	...	21	...	...	21	106	185	168	353
…napore	[illegible]	1	2	...	...	3	18	28	22	50
…h ...	[illegible]	...	2	...	...	2	15	43	34	77
…agole	[illegible]	...	1	...	...	1	12	18	24	42
…AYA DISTRICT.										
…a ...	2	3	120	1	...	126	1,310	1,864	1,695	3,559
…ari ...	[illegible]	...	1	...	...	1	27	84	48	132
…adnagar	[illegible]	...	2	1	...	3	43	128	108	236

Districts and Towns.	Ratio of deaths per 1,000 of population. (15) Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and diarrhœa.	Respiratory diseases.	Injuries.	All other causes.	From all causes. Male.	Female.	Total.	Mean of previous five years.
DISTRICTS EXCLUDING TOWNS.												
…ATNA DIVISION.												
…tna ...	0·7	0·1	...	16·7	0·4	0·5	0·3	5·6	24·7	24·2	24·5	23·8
…ya ...	0·3	0·2	...	22·3	0·03	0·01	0·2	4·9	28·8	27·3	28·0	28·9
…ahabad	1·9	0·4	0·02	19·3	0·01	0·01	0·2	4·8	26·8	26·1	26·4	25·2
…RHUT DIVISION.												
…ran ...	0·4	0·4	0·5	13·2	0·1	0·3	0·3	6·8	24·2	20·8	22·0	22·6
…hamparan	0·1	0·3	0·02	18·3	0·08	0·01	0·2	2·7	23·7	19·7	21·7	22·4
…uzaffarpur	0·1	0·2	0·1	21·2	0·04	0·02	0·03	1·4	25·9	21·3	23 5	24·6
…arbhanga	0·03	0·2	...	19·9	0·05	0·03	0·4	1·9	24·2	20·8	22·5	22·3
BHAGALPUR DIVISION.												
…onghyr	0·7	0·6	...	19·7	0·04	0·01	0·3	3·6	26·1	23·8	24·9	25·2
Bhagalpur	0·8	0·3	0·02	20·9	0·04	0·008	0·2	2·1	25·7	23·2	24·4	23·4
Purnea ...	1·4	0·09	...	23·8	0·03	0·01	0·2	1·3	28·0	25·0	26·6	25·5
Santal Parganas ...	0·9	0·1	...	15·9	0·06	0·09	0·1	1·0	19 9	16·8	18·3	18·1
CHOTA NAGPUR DIVISION.												
…azaribagh	0·6	0·2	...	19·2	0·04	0·03	0·2	2·5	24·4	21·0	22·7	21·1
…anchi ...	0·07	0·03	...	20·9	0·8	0·06	0·3	3·0	27·3	23·1	25·2	23·2
…alamau	0·1	0·5	...	24·1	0·03	0·02	0·3	4·3	38·8	27·7	29·2	28·0
…anbhum	0·2	0·2	...	15·0	0·05	0·07	0·3	1·0	18·1	15·4	16·8	16·9
…nghbhum	0·06	0·02	...	14·1	0·08	0·001	0·2	1·4	17·6	14·0	15·8	16·1
…otal for the province.	0·5	0·2	0·06	19·1	0·1	0·08	0·2	2·7	24·9	21·9	23·4	23·3
TOWNS.												
PATNA DISTRICT.												
…tna City	0·2	0·3	...	3·6	1·4	1·2	0·5	4·9	11·1	14·0	12·4	12·3
…har ...	0·08	0·1	...	3·8	0·5	0·2	0·5	2·3	7·5	7·5	7·5	7·3
…napore	0·4	...	...	0·5	0·03	0·08	0·1	0·8	2·3	1·9	2·0	2·1
…h ...	2·3	...	...	2·6	0·4	0·8	0·3	1·9	8·3	7·4	7·9	7·7
…agole	...	0·1	...	3·2	0·1	0·4	0·1	1·6	4·4	7·3	5·7	5·5
…AYA DISTRICT.												
…a ...	0·6	0·03	...	21·1	1·6	0·8	1·4	14·9	36·8	45·3	40·4	40·0
…ari ...	1·5	...	...	17·2	...	0·4	0·2	4·9	31·3	17·2	24 0	23·9
…adnagar	0·3	...	...	15·1	0·4	0·4	0·3	3·7	20·5	19·9	20·2	20·0

APPDIX I—*contd.*

Annual Form No. VI.—Deaths registered from different causes in listricts and towns of Bihar Province, during the year 1939—contd.

3			4			5			6	7	8	9	10	11						12	13			14										
pulation according to census of 1931.			Births.			Birth rate.								Injuries.							Total deaths from all causes.			Ratio of deaths per 1,000 of population.										
														Suicide.																		From		
ale.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and diarrhoea.		Female.	Wounds or accidents.	Snake-bite or killed by wild animals.	Rabies.	Total.	All other causes.	Male.	Female.	Total.	Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	Male.	Female.	
26,685	22,287	48,922	271	227	498	5·5	4·6	10·1	5	2	...	85	7		...	4	1	...	5	76	104	85	189	0·1	0·04	...	1·7	0·1	0·3	0·1	1·6	3·9	3·8	
7,430	6,019	13,449	161	141	302	11·9	10·5	22·4	7	...	...	68	5	1	1	2	1	...	5	24	52	59	111	0·5	...	...	5·0	0·4	0·2	0·4	1·8	6·9	9·8	
7,602	6,819	14,421	141	93	234	9·8	6·4	16·2	...	...	...	18	...		...	2	...	...	2	5	15	10	25	...	...	...	1·2	...	...	0·1	0·3	1·9	1·5	
4,791	4,870	9,661	82	41	123	8·5	4·2	12·7	1	...	...	16	5		...	...	...	...	...	3	12	13	25	0·1	...	...	1·7	0·5	...	...	0·3	2·5	2·6	
12,473	12,702	25,175	246	246	492	9·8	9·8	19·6	16	20	...	134	5		1	1	4	...	6	33	123	93	216	0·6	0·8	...	5·3	0.3	0·08	0·2	1·3	9·8	7·3	
3,220	2,782	6,002	89	64	153	14·8	10·7	25·5	2	7	...	33	...		...	1	...	...	1	11	28	27	55	0·3	1·1	...	5·5	...	0·3	0·2	1·8	8·7	9·7	
25,934	21,514	47,448	723	604	1,327	15·2	13·7	27·9	7	109	...	284	49		...	63	2	...	65	456	608	490	1,098	2·0	2·3	...	5·9	1·0	0·8	1·3	9·6	23·4	22·7	
4,297	4,525	8,812	206	173	379	23·4	19·6	43·0	1	35	...	91	13		...	1	1	...	2	46	98	99	197	0·1	3·9	...	10·3	1·4	1·0	0·2	5·2	22·8	21·8	
7,981	6,234	14,215	344	371	715	24·2	26·1	50·3	11	10	28	169	2	2	5	1	1	...	9	82	160	156	316	0·7	0·7	1·8	11·8	0·1	0·3	0·6	5·7	20·1	25·0	
14,659	13,282	27,941	387	374	761	13·8	13·4	37·2	1	1	15	137	7	1	...	4	2	...	7	168	199	138	337	0·03	0·03	0·5	4·9	0·2	0·03	0·2	6·0	13·6	10·4	
10,526	7,019	17,545	168	126	294	9·6	7·2	16·8	...	...	...	72	1		...	...	...	...	...	10	40	44	84	...	...	...	4·1	0· 6	0·06	...	0·6	3·8	6·2	
25,050	17,999	43,046	336	336	673	7·8	7·8	15·6	14	51	...	168	26	1	...	35	...	2	38	258	342	230	572	0·3	1·1	...	3·9	0·6	0·4	0·9	5·9	13·6	12·8	1
6,255	4,446	10,701	143	120	263	13·3	11·2	24·5	3	2	...	84	21		...	5	...	...	5	94	140	86	226	0·3	0·2	...	7·8	1·9	1·6	0·5	8·7	22·3	19·3	2
9,936	9,363	19,299	340	306	646	17·6	15·8	33·4	4	1	65	175	8		..	19	...	6	25	141	215	237	450	0·2	0·05	3·1	9·0	0·4	1·6	1·3	7·3	21·5	25·3	2
4,676	4,516	9,192	164	178	342	17·9	19·3	37·2	...	2	...	95	7		...	7	...	2	9	68	108	79	187	...	0·2	...	10·3	0 7	0·6	1·0	7·4	23·1	17·4	2
2,274	28,402	60,676	1,090	932	2,022	17·9	15·4	33·3	...	4	...	447	34	2	2	57	3	2	66	617	699	510	1,209	...	0·07	...	7·3	0·6	0·7	1·0	10·2	21·7	17·9	19
4,593	4,336	8,869	108	107	215	12·2	12·0	24·2	...	21	...	34	3		...	2	...	...	2	60	62	62	124	...	2·4	...	3·8	0·3	0·4	0·2	6·7	13·7	14·3	13
6,101	3,790	9,891	124	111	235	12·5	11·3	23·7	...	1	...	43	...	1	...	1	...	...	2	50	47	52	99	...	0·1	...	4·3	...	0·3	0·2	5·0	7·7	13·7	10
9,946	8,843	18,789	251	257	508	13·4	13·6	27·0	...	...	...	108	2		1	3	1	1	6	87	106	102	208	...	...	...	5·7	0·1	0·3	0·3	4·6	10·6	11·5	11·
7,843	25,020	52,863	673	522	1,195	12·7	9·9	22·6	10	150	...	227	30		1	10	1	1	13	223	362	317	679	0·2	2·8	...	4·3	0·6	0·5	0·3	4·2	13·0	12·6	12·
6,378	13,968	30,346	576	476	1,052	18·9	15·7	34·7	27	20	...	243	38	2	...	7	...	...	9	157	277	234	511	0·9	0·7	...	8·0	1·2	0·6	0·3	5·2	16·9	16·9	16·
3,868	36,979	83,847	407	321	728	4·9	3·8	8·7	43	12	...	291	21	2	...	11	3	...	16	200	370	237	607	0·5	0·1	...	3·5	0·2	0·3	0·2	2·4	7·9	6·4	7 2
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	117	2·8	0·8	...	13·9	0·2	1·1	...	3·4	25·5	19·2	22·3

Annual Form No. VI.—Deaths registered from different causes in districts and towns of Bihar Province, during the year 1939—concld.

3			4			5			6	7	8	9	10	[cut]	11					12	13			14									
Population according to census of 1931.			Births.			Birth rate.									Injuries.						Total deaths from all causes.			Ratio of deaths per 1,000 of population.								From a[ll causes]	
															Suicide.																		
Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and diarrhœa.		Female.	Wounds or accidents.	Snake-bite or killed by wild animals.	Rabies.	Total.	All other causes.	Male.	Female.	Total.	Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and diarrhœa.	Respiratory diseases.	Injuries.	All other causes.	Male.	Female.
8,530	7,353	15,863	47	24	71	2·9	1·5	4·4	4	1	...	10	...		...	1	...	...	1	23	26	13	39	0·2	0·06	...	0·6	...	...	0·06	1·4	3·0	1·7
8,117	6,100	14,217	45	40	94	3·3	3·4	6·6	8	10	..	45	2		...	1	...	...	1	5	34	38	72	0·5	0·7	...	3·2	0·2	0·07	0·07	0·3	4·2	6·2
,317	4,154	9,471	35	32	67	8·7	3·3	7·0	1	6	...	18	1		...	...	...	...	...	3	14	16	30	0·1	0·6	...	1·9	0·1	0·1	...	0·3	2·6	3·8
,997	3,968	8,965	20	22	51	3·2	2·4	5·6	...	...	...	37	...		...	1	...	...	1	3	18	15	33	...	...	...	3·0	...	0·2	0·1	0·3	3·6	3·7
,903	10,074	20,977	214	198	412	10·2	9·5	19·7	...	2	...	110	3		...	3	...	...	4	27	71	80	151	...	0·1	...	5·2	0·1	0·2	0·3	1·3	6·5	7·9
,312	4,446	8,758	144	150	294	16·4	17·2	33·6	1	...	...	67	2	1	1	3	...	...	5	14	51	61	112	0·1	...	...	9·9	0·2	0·3	0·6	1·6	11·8	13·7
,122	10,000	21,122	55	68	123	2·6	3·2	5·8	2	3	...	35	2		...	2	...	...	2	9	30	28	58	0·1	0·1	...	1·6	0·1	0·2	0·1	0·4	2·7	2·8
6,918	23,599	50,517	465	412	877	9·2	8·1	17·3	23	6	...	235	31		...	...	..	...	...	137	230	196	426	0·4	0·1	...	4·4	0·6	0·1	...	2·7	8·5	8·3
3,816	3,761	7,577	103	81	184	13·6	10·7	24·3	...	...	...	46	6		...	...	...	...	1	17	45	30	75	...	...	...	6·0	0·8	0·7	0·1	2·2	11·8	7·9
6,601	5,439	12,040	96	78	174	7·0	6·5	14·4	...	4	...	28	2		...	3	...	...	4	17	35	21	56	...	0·3	...	2·3	0·2	0·1	0·3	1·4	5·3	3·8
14,388	11,586	25,974	207	186	393	7·9	7·2	15·1	2	...	...	230	...		1	1	...	...	2	12	135	111	246	0·08	...	...	8·9	...	...	0·08	0·5	9·4	9·6
3,654	3,485	7,139	117	89	206	16·4	12·5	28·9	...	...	...	128	...		...	...	...	...	...	4	81	53	134	...	...	...	17·9	...	0·3	...	0·6	22·1	15·2
3,470	3,454	6,924	67	65	132	9·7	9·4	19·1	...	...	...	59	...		...	...	...	1	1	11	52	21	73	...	...	...	8·5	...	0·3	0·2	1·6	14·9	6·0
9,882	6,476	16,356	234	259	493	14·3	15·8	30·1	...	21	...	86	8	1	1	...	...	1	3	192	198	128	326	...	1·3	...	5·3	0·5	0·9	0·2	11·7	20·0	19·8
5,716	5,069	10,785	146	134	280	13·5	12·4	25·9	33	1	...	73	11		...	8	...	...	8	53	96	73	169	2·1	0·1	...	6·8	1·0	...	0·7	4·9	16·8	14·4
6,215	4,976	11,191	62	69	131	5·5	6·2	11·7	...	...	...	58	1		...	...	...	...	...	19	43	37	80	...	...	...	5·2	0·1	0·2	...	1·7	6·9	7·4
5,075	3,646	8,721	77	63	140	8·8	7·2	16·0	1	...	...	46	3		..	2	...	...	2	37	57	33	90	0·1	...	...	5·3	0·3	0·1	0·2	4·2	11·2	9·0
51,137	32,601	83,738	453	393	846	5·4	4·7	10·1	1	...	...	212	9	3	...	18	...	...	21	212	286	172	458	0·01	...	...	2·5	0·1	0·04	0·3	2·5	5·6	5·3
733,983	592,193	1,326,176	13,963	12,323	26,286	10·5	9·3	19·7	461	572	108	8,199	811	2	20	520	32	16	610	6,080	9,559	7,923	17,482	0·3	0·4	0·1	6·6	0·6	0·5	0·4	4·5	13·0	13·3
,238,978	16,132,239	32,361,217	554,203	523,508	1,077,711	17·1	16·2	33·3	16,766	8,362	1,938	601,866	4,141	5	644	3,151	3,523	89	7,972	1,[illegible]0,551	395,360	349,348	744,708	0·5	0·3	0·06	18·6	0·1	0·1	0·2	6·2	24·3	21·6

(a) Excluding cantonment population.

APPENDIX TO ANNU[...] FORM No. VI.

Births and Deaths registered in the cantonment of [...]ihar Province, during the year 1939.

	3			4						5	6	7	8	9	10	11						12	13			14								
	Indian non-military population according to Census of 1931.			Births.			Birth-rate.									Injuries.							Total deaths from all causes.			Ratio of deaths per 1,000 of population.								All …
																Suicide.																		
…ent.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and diarrhœa.	Respiratory diseases.	Male.	Female.	Wounds or accidents.	Snake-bite or killed by wild animals.	Babies.	Total.	All other causes.	Male.	Female.	Total.	Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and diarrhœa.	Respiratory diseases.	Injuries.	All other causes.	Male.
…	5,909	4,308	10,217	41	31	72	4·0	3·0	7·0	5	…	…	27	…		…	…	…	1	…	1	28	28	29	57	·5	…	…	2 6	…	0·09	0·09	2·2	4·7

ANNUAL FO O. VI(*a*)

Deaths registered from different kinds of feve sentery, diarrhoea, respiratory diseases and other causes.

	Malaria.	Enteric Fever.	Measles.	Relapsing Fever (Spirochaetal).	Kala Azar.	Influenza.	Cerebrospinal Fever.	Typhus Fever.	Blackwater Fever.	Other Fevers.	Dysentery.	Diarrhoea.	Pneumonia.	Pulmonary Tuberculosis.	Hooping cough.	Other respiratory diseases.	Beri-beri.	Acute poliomyelitis.	Diptheria.	Chicken-pox.	Mumps.	Tuberculosis of joints.	Other tubercular diseases.	Leprosy.	Cancer.	Deaths from child-birth.	Deaths under one year.
	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
T.																											
...	58	75	13	...	...	...	...	...	...	525	200		113	121	15	[illegible]	...	...	...	5	...	...	6	2	7	8	
...	...	...	...	...	...	...	...	...	...	156	20		1	...	1	9	...	...	...	...	...	...	...	...	...	...	
...	...	...	...	...	...	...	...	...	...	30	5		2	...	1	5	...	...	...	1	...	...	...	...	...	...	
...	62	...	...	...	...	...	...	...	...	...	6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
...	—	...	...	...	...	...	...	...	...	39	1		1	...	...	8	...	...	...	...	...	...	...	...	...	...	
T.																											
...	...	1,675	...	...	...	...	...	...	...	936	144		...	...	...	[illegible]	...	...	...	1	...	...	336	...	...	...	
...	...	9	7	...	...	...	...	...	...	87	...		...	...	...	2	...	...	...	...	...	...	...	...	...	1	
...	...	...	...	...	...	...	...	...	...	165	5		...	...	...	...	...	...	...	...	...	...	...	...	...	7	
ICT.																											
...	...	...	...	...	...	...	...	...	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
...	...	...	...	...	...	...	...	...	...	13	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	
...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
...	...	...	...	...	...	...	...	...	...	5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
RICT.																											
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
RICT.																											
...	...	...	...	...	...	...	...	...	...	14	26	...	...	...	...	...	...	...	...	2	...	...	...	...	...	18	8
...	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5	8
...	...	...	...	...	...	...	...	...	...	51	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	17	3
...	20	...	...	...	...	...	...	...	...	22	8	...	...	...	11	18	...	...	...	...	...	...	4	...	3	1	5
T.																											
...	...	...	...	...	...	23	...	7	...	160	23	...	...	...	...	23	...	...	...	10	...	...	...	...	...	11	14
...	...	...	...	...	...	...	...	...	...	213	6	...	...	...	...	10	...	...	...	...	...	...	...	...	...	8	13
T.																											
...	314	...	...	...	...	...	...	...	...	...	17	...	...	...	...	17	...	...	...	...	...	...	...	...	...	...	33
...	139	...	...	...	...	...	...	...	...	...	2	...	...	...	...	8	...	...	...	2	...	...	...	...	...	...	41
...	100	...	...	...	...	...	...	...	...	...	1	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	11
...	76	...	...	...	...	...	...	...	...	...	6	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	5
S.																											
...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	9
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
.																											
...	...	...	...	...	...	...	...	...	...	190	20	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	53
...	...	...	...	...	...	...	...	...	...	80	10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	7
.																											
...	...	...	...	...	...	...	...	...	...	176	...	...	2	...	...	2	...	...	...	...	...	...	...	...	...	2	28
...	6	...	...	...	...	...	...	...	...	2	...	...	6	3	...	3	...	...	...	...	...	...	...	...	...	...	11
...	...	...	...	...	...	...	...	...	...	72	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	11
...	1	...	...	...	...	...	...	...	...	71	7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	33
T.																											
...	...	...	...	...	...	...	...	...	...	27	5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	18
...	...	...	...	...	...	...	...	...	...	20	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	8

Deaths registered from different kinds of fever, dysentery, diarrhoea, respiratory diseases and other causes—concld.

		Malaria.	Enteric Fever.	Measles.	Relapsing Fever (Spirochacial).	Kala Azar.	Influenza.	Cerebrospinal Fever.	Thypus Fever.	Blackwater Fever.	Other Fevers.	Dysentry.	Diarrhoea.	Pneumonia.	Pulmonary Tuberculosis.	Hooping cough.	Other respiratory diseases.	Beri-beri.	Acute poliomylitis.	Diptheria.	Chicken-pox.	Mumps.	Tuberculosis of joints.	Other tubercular diseases.	Leprosy.	Cancer.	Deaths from child-birth.	Deaths under one year.
		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
ICT.																												
...	...	...	...	...	...	...	...	...	...	...	487	29	[illegible]	...	...	...	...	...	...	...	73	...	...	...	...	...	...	[illegible]
...	...	6	...	...	...	...	...	...	...	...	39	1	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	[illegible]
...	...	1,337	...	...	...	...	...	...	...	...	21	18	...	...	...	...	35	...	...	...	...	...	...	...	...	...	...	[illegible]
...	...	1,992	...	...	...	...	...	...	...	...	...	6	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	[illegible]
T.																												
...	...	30	...	...	...	...	...	...	...	...	3	5	...	...	...	...	3	...	...	...	2	...	...	...	...	...	...	[illegible]
ICT.																												
...	...	...	...	...	...	...	...	...	...	...	...	127	[illegible]	...	...	...	1	...	...	...	...	...	...	...	...	...		[illegible]
...	...	...	...	...	...	...	...	...	...	...	...	110	[illegible]	...	...	...	...	...	...	...	...	...	...	...	...	...	...	[illegible]
...	...	...	...	...	...		...	...	...	...	...	35	[illegible]	...	...	...	...	...	...	...	...	...	...	...	...	...	...	[illegible]
ICT.																												
...	...	...	...	...	...	...	...	...	...	...	201	91	[illegible]	...	...	...	24	...	...	...	...	...	...	...	...	...	...	[illegible]
...	...	...	...	...	...	...	...	...	...	...	78	2	[illegible]	...	...	...	6	...	...	...	...	...	...	...	...	...	...	[illegible]

Annual Form No. VII.—Deaths registered from Cholera in [D]istricts of Bihar Province, during each month of the year 1939.

	3		4													6			7		
	Circles of registration.		Villages.													Total.			Ratio of deaths per 1,000 of population.		
	Number in each district.	Number from which deaths from cholera were reported.	Number in each district.	Number from which deaths from cholera were reported.	January.	February.	March.	April.	May.	June.	August.	September.	October.	November.	December.	Male.	Female.	Total.	Male.	Female.	Total.
[...]SION.																					
...	20	20	2,315	182	1	...	18	89	99	60	300	160	213	119	39	625	566	1,191	0·6	0·6	[illegible]
...	16	14	6,038	370	1	...	2	14	31	9	242	176	86	43	10	379	329	708	0·3	0·8	[illegible]
...	17	10	4,735	347	1	...	...	3	14	146	1,146	624	731	389	184	1,806	1,838	3,644	1·8	1·8	[illegible]
...	53	41	13,108	899	3	...	20	106	144	215	1,688	960	1,030	551	233	2,810	2,733	5,543	0·8	0·8	[illegible]
[...]SION.																					
...	13	12	4,305	191	...	1	3	..	15	126	420	87	19	15	6	564	541	1,105	0·4	0·4	[illegible]
...	11	9	2,548	438	...	2	...	47	46	75	50	43	13	7	...	168	121	289	0·1	0·1	[illegible]
...	14	9	4,059	240	7	1	42	43	46	61	61	42	42	7	19	269	145	414	0·2	0·1	[illegible]
...	14	13	3,135	500	19	6	55	8	...	...	10	...	...	...	...	62	57	109	0·03	0·03	[illegible]
...	52	43	14,047	1,369	26	10	100	98	107	262	541	172	74	29	25	1,053	864	1,917	0·2	0·1	[illegible]
[...]VISION.																					
...	13	13	2,610	170	2	2	40	24	3	14	126	224	372	673	84	797	823	1,620	0·7	0·7	[illegible]
...	14	13	3,080	122	7	...	30	54	16	27	269	169	240	786	208	976	959	1,935	0·9	0·9	[illegible]
...	17	15	4,160	512	67	113	167	728	317	167	...	317	68	54	59	1,180	1,086	2,266	1·0	1·0	[illegible]
...	10	9	10,160	301	2	...	10	15	23	79	482	348	281	438	131	1,041	875	1,916	1·0	0·9	[illegible]
...	54	50	20,010	1,105	78	115	247	821	359	287	827	1,058	961	1,951	482	3,994	3,743	7,737	0·9	0·8	[illegible]
[...]IVISION.																					
...	21	17	6,087	136	...	...	2	7	9	12	92	156	152	282	161	431	485	916	0·6	0·6	[illegible]
...	32	15	3,838	99	...	...	2	1	4	...	36	3	11	12	...	73	58	131	1·09	0·07	[illegible]
...	10	5	3,134	90	...	...	...	...	3	1	10	23	53	12	4	62	44	106	0·1	0·1	[illegible]
...	35	24	4,642	65	1	5	5	8	45	63	49	47	34	32	14	192	159	351	0·2	0·2	[illegible]
...	13	4	3,013	6	...	...	...	...	...	...	30	26	6	...	...	38	32	70	0·08	0·07	[illegible]
..	111	65	20,714	396	1	5	9	16	61	76	217	255	256	338	179	796	778	1,574	0·2	0·2	[illegible]
[...]uce ...	27	202	67,879	3,769	108	130	376	1,031	671	840	3,273	2,445	2,321	2,869	919	8,653	8,118	16,771	0·5	0·5	0·5

APPENDIX I—*contd.*

Annual Form No. VIII.—Deaths registered from small-pox in districts of Bihar Province, during each month of the year 1939.

	3		4		5												6			7		8		
	Circles of Registration.		Villages.														Total.			Number of deaths among children.		Ratio of deaths per 1,000 of population.		
	Number in each district.	Number from which deaths from small-pox were reported.	Number in each district.	Number from which deaths from small-pox were reported.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Male.	Female.	Total.	Under 1 year.	One year and under 10 years.	Male.	Female.	Total.
ON.																								
...	20	16	2,315	170	12	15	14	35	41		21	9	...	3	5	15	96	95	1[illegible]3	55	52	0·1	0·1	0·1
...	16	14	6,058	412	22	28	61	75	87		34	51	31	28	27	37	263	282	545	41	55	0·2	0·2	0·2
...	17	17	4,735	130	38	72	157	123	77	1	143	49	35	14	10	34	437	437	874	47	37	0·4	0·4	0·4
...	53	47	13,108	712	72	110	232	233	205	2	198	109	66	45	42	86	798	814	1,612	143	144	0·2	0·2	0·2
ION.																								
...	13	12	4,315	222	36	28	107	143	159	1	240	96	36	20	86	57	565	592	1,157	29	125	0·4	0·4	0·4
...	11	11	2,548	122	8	11	62	88	169		104	30	20	10	3	...	298	303	601	87	82	0·3	0·3	0·3
...	14	13	4,059	192	28	31	30	71	74		71	60	30	30	28	...	278	235	513	19	74	0·2	0·2	0·2
...	14	10	3,135	122	10	41	17	205	273		75	84	12	3	7	16	421	362	783	104	37	0·2	0·2	0·2
...	52	46	14,047	658	82	111	216	507	685	4[illegible]	490	220	98	63	74	73	1,562	1,492	3,054	239	318	0·2	0·2	0·2
VISION.																								
...	13	12	2,610	503	24	41	140	286	208	2[illegible]	138	71	33	35	52	138	748	787	1,535	245	408	0·7	0·7	0·7
...	14	12	3,080	100	29	29	58	79	105	15	41	42	51	13	13	59	380	306	686	...	...	0·3	0·2	0·3
...	17	16	4,100	84	35	1	6	48	22	2[illegible]	17	14	22	...	...	4	99	99	198	...	5	0·08	0·09	0·09
...	10	1[illegible]	10,100	92	3	10	20	27	80	[illegible]	17	12	5	28	5	36	125	102	227	1	1	0·1	0·1	0·1
...	54	50	20,010	779	91	91	224	440	455	4[illegible]	213	139	111	76	70	237	1,352	1,294	2,646	246	414	0·3	0·3	0·3
VISION																								
...	21	20	6,087	140	3	11	15	23	39	4[illegible]	19	22	24	11	11	35	123	134	257	5	45	0·2	0·2	0·2
...	32	10	3,838	75	...	5	5	3	3	[illegible]	4	2	7	...	4	11	26	25	51	...	...	0·3	0·3	0·03
...	10	9	3,134	171	30	53	47	69	89	2[illegible]	28	41	9	12	12	29	205	190	395	4	2	0·5	0·5	0·5
...	35	28	4,042	114	9	20	51	60	104	2[illegible]	22	10	9	3	3	22	191	142	333	40	71	0·2	0·2	0·2
...	13	2	3,013	18	...	..	2	6	3	...	..	..	...	...	3	...	9	5	14	...	2	0·02	0·01	0·02
...	111	69	20,714	518	42	89	120	161	188	9[illegible]	73	75	49	26	33	97	554	496	1,050	49	120	0·1	0·1	0·1
...	270	212	67,879	2,667	287	401	792	1,341	1,533	1,2[illegible]	974	543	324	210	219	403	4,266	4,096	8	677	996	0·2	0·2	0·2

Annual Form No. IX.—Deaths registered from Fevers in the di[stricts of the] Bihar Province, during each month of the year 1939.

	3		4													6			7	
	Circles of Registration.		Villages.													Total.			Ratio of deaths per 1,000 of population.	
ict.	Number in each district.	Number from which deaths from fevers were reported.	Number in each district.	Number from which deaths from fevers were reported.	January.	February.	March.	April.	May.	June.	August.	September.	October.	November.	December.	Male.	Female.	Total.	Male.	Female.
IVISION.																				
... ...	20	20	2,315	2,295	1,826	8 3	1,382	1,703	1,919	1,879	3,157	3,446	3,066	2,578	2,832	13,959	13,470	27,429	14·6	15·1
... ...	*16*	13	6,058	5,970	3,122	2,300	2,804	3,160	4,330	4,208	6,215	6,457	6,158	5,206	4,844	26,737	26,323	53,060	22·4	22·0
... ...	17	17	4,735	4,335	2,505	1,560	2,249	1,902	2,247	3,293	3,950	3,919	4,416	3,318	3,363	17,758	18,292	36,050	17·7	18·4
Total ...	53	53	13,168	12,595	7,453	5,043	6,435	6,765	8,496	9,880	13,322	13,822	13,640	11,102	11,039	58,454	58,085	116,539	18·5	18·8
DIVISION.																				
... ...	13	13	4,305	4,130	2,195	1,634	1,888	2,104	2,258	2,682	3,704	3,470	3,346	2,625	2,900	17,563	15,023	32,586	14·4	11·8
... ...	11	11	2,548	2,520	3,156	2,069	2,361	3,232	2,924	3,587	3,670	3,687	3,452	3,091	4,072	21,203	17,486	38,689	19·6	16·4
... ...	14	14	4,059	4,049	6,140	4,608	4,300	5,228	4,556	5,559	5,559	4,300	4,300	6,140	5,261	33,036	28,143	61,179	22·9	18·8
... ...	14	14	3,135	3,069	6,293	3,703	4,633	4,975	5,798	4,892	4,604	4,555	5,410	5,770	7,520	32,587	29,022	61,609	20·7	18·2
Total ...	52	52	14,047	13,768	17,784	12,014	13,182	15,539	15,536	16,720	17,537	16,012	16,508	17,626	19,753	104,389	89,624	194,013	19·6	16·5
R DIVISION.																				
...	13	13	2,610	2,573	2,750	1,961	2,877	3,271	2,684	3,223	4,212	4,608	4,667	5,259	5,365	22,904	20,977	43,881	19·9	18·4
.. ...	14	14	3,080	2,852	4,414	2,938	3,388	3,414	3,880	2,991	3,807	4,028	4,420	4,279	4,890	23,813	21,389	45,202	21·0	19·4
... ...	17	17	4,160	4,035	4,870	3,706	4,254	4,451	4,067	4,204	3,806	4,067	3,885	4,475	5,823	28,039	23,557	51,596	24·8	22·2
s	10	10	10,160	9,725	2,034	1,618	2,548	2,756	2,900	2,819	3,550	3,353	2,631	2,794	3,036	17,260	14,866	32,126	16·8	14·4
Total ...	54	54	20,010	19,185	14,098	10,223	13,067	13,892	13,531	12,737	15,375	16,056	15,603	16,807	19,114	92,016	80,789	172,805	20·7	18·6
UR DIVISION.																				
... ...	21	21	6,087	5,290	2,088	1,834	1,829	2,012	2,417	2,203	2,795	2,981	2,759	2,506	2,978	15,004	13,327	28,331	19·9	17·4
... ...	32	32	3,838	3,750	2,349	1,924	2,088	1,925	2,805	2,261	3,618	3,665	3,829	2,749	2,487	17,035	14,888	31,923	21·9	18·8
... ...	10	10	3,134	3,080	1,434	1,268	1,313	1,386	1,380	1,502	1,735	1,729	2,351	2,074	1,822	10,155	9,318	19,473	24·8	22·8
... ...	35	35	4,642	4,469	1,837	1,805	2,027	1,776	2,547	2,024	2,883	3,037	2,422	2,204	2,156	14,973	11,962	26,935	15·9	14·2
... ...	*13*	*13*	3,013	2,968	830	883	987	1,081	881	844	1,088	1,271	1,089	1,014	999	6,546	5,328	11,874	13·9	11·6
Total ...	111	111	20,714	19,557	8,538	7,714	8,244	8,181	10,030	8,834	12,119	12,683	12,444	10,547	10,442	63,713	54,823	118,536	19·0	16·6
rovince ...	270	270	67,879	65,105	47,873	34,994	40,928	44,376	47,593	47,671	58,353	58,573	58,195	56,082	60,348	318,572	283,321	601,893	19·6	17·5

APPENDIX I—*contd.*

Annual Form No. X.—Deaths registered from Dysentery and Diarrhœa in districts of Bihar Province, during each month of the year 1939.

	3		4		5												6			7		
	Circles of Registration.		Villages.														Total.			Ratio of deaths per 1,000 of population.		
	Number in each district.	Number from which deaths from Dysentery and Diarrhœa were reported.	Number in each district.	Number from which deaths from Dysentery and Diarrhœa were reported.	January	February.	March.	April.	May.	June.	July.	[illegible]	September.	October.	November.	December.	Male.	Female.	Total.	Male.	Female.	Total.
...	20	20	*2,315*	355	59	30	52	91	54	43	111	[illegible]	133	140	96	73	553	436	989	0·5	0·5	0·5
...	*16*	15	*6,058*	200	10	7	8	16	17	18	32	[illegible]	25	24	21	23	123	113	236	0·1	0·1	0·1
..	17	9	4,735	36	1	3	2	...	1	...	3	[illegible]	1	10	7	4	18	28	46	0·02	0·02	0·02
...	53	44	13,108	591	70	40	62	107	72	61	146	[illegible]	159	174	124	100	694	577	1,271	0·2	0·2	0·2
...	13	13	4,805	200	27	8	65	31	27	14	36	[illegible]	30	17	12	38	219	148	367	0·1	0·1	0·1
...	11	9	2,548	198	...	1	...	140	7	2	5	[illegible]	...	...	...	8	110	63	173	0·1	0·06	0·08
..	14	14	4,059	90	26	8	13	22	22	8	22	[illegible]	13	13	26	4	137	48	185	0·1	0·03	0·06
...	14	11	3,135	81	7	8	15	9	18	9	40	[illegible]	10	17	4	6	110	70	180	0·07	0·04	0·06
...	52	47	14,047	569	60	25	93	202	74	33	103	[illegible]	53	47	42	56	576	329	905	0·1	0·06	0·08
...	13	10	2,610	52	6	40	4	11	10	10	6	[illegible]	17	10	17	9	94	68	162	0·08	0·06	0·07
...	14	11	3,080	39	6	2	7	8	8	3	4	[illegible]	6	12	22	7	90	18	108	0·08	0·02	0·05
...	17	11	4,160	52	6	3	5	20	13	10	10	[illegible]	13	6	11	3	70	34	104	0·06	0·03	0·04
..	10	9	10,160	97	5	2	11	6	9	10	13	[illegible]	10	11	13	3	64	61	125	0·06	0·06	0·06
..	54	41	20,010	240	23	47	27	45	40	33	33	[illegible]	46	39	63	22	318	181	499	0·07	0·04	0·05
..I-	21	12	6,087	51	2	1	3	5	5	6	8	[illegible]	9	4	3	11	52	18	70	0·07	0·02	0·05
..	32	30	3,838	645	35	35	39	50	57	75	113	[illegible]	163	170	74	41	690	486	1,176	0·9	0·6	0·8
.	10	4	*3,134*	15	1	...	9	...	4	2	2	[illegible]	4	5	...	1	19	10	29	0·04	0·02	0·03
	35	20	4,642	47	2	9	12	11	7	6	11	[illegible]	10	10	7	5	61	38	99	0·07	0·04	0·05
	13	9	3,013	24	8	3	7	10	13	14	3	[illegible]	9	14	2	2	52	40	92	0·1	0·1	0·1
	111	75	20,714	782	48	48	70	76	86	103	157	334	195	203	86	60	874	592	1,466	0·1	0·1	0·2
	270	207	67,879	2,182	201	160	252	430	272	230	439	683	453	463	315	238	2,462	1,679	4,141	0·1	0·1	0·1

APP IX I—*contd.*

Annual Form No. XI.—Deaths registered from Respiratory diseases in *strict of Bihar Province, during each month of the year* 1939.

	3		4		5											6			7	
	Circles of Registration.		Villages.													Total.			Ratio of deaths per 1,000 population.	
t.	Number in each district.	Number from which deaths from Respiratory diseases were reported.	Number in each district.	Number from which deaths from Respiratory diseases were reported.	January.	February.	March.	April.	May.	June.	August.	September.	October.	November.	December.	Male.	Female.	Total.	Male.	Female.
ISION.																				
... ...	20	20	2,315	420	117	79	102	93	86	53	86	81	85	93	112	616	456	1,072	0·6	0·5
.. ...	16	11	6,058	90	14	12	14	5	6	2	4	12	9	8	8	65	37	102	0·05	0·03
.. ...	17	12	4,735	70	1	3	1	3	...	5	5	1	2	4	1	20	12	32	0·02	0·01
al ...	53	43	13,108	527	132	94	117	101	92	60	95	94	96	105	121	701	505	1,206	0·2	0·1
VISION.																				
... ...	13	13	4,305	140	102	53	85	62	54	73	98	66	87	70	107	557	394	951	0·4	0·3
...	11	6	2,548	13	1	2	2	2	3	3	4	1	2	2	...	18	7	25	0·02	0·007
... ...	14	13	4,059	100	6	8	23	12	5	5	5	23	23	6	13	55	86	141	0·03	0·05
... ...	14	14	3,135	39	9	2	5	8	3	2	21	9	9	4	6	66	39	105	0·04	0·02
al ...	52	46	14,047	292	118	65	115	84	65	83	128	99	121	82	126	696	526	1,222	0·1	0·09
DIVISION.																				
.. ...	13	11	2,610	28	5	2	7	9	8	16	4	6	3	8	8	50	25	75	0·04	0·02
... ...	14	10	3,080	29	9	3	4	3	8	8	3	8	3	...	7	33	14	47	0·03	0·01
... ...	17	10	4,160	15	3	1	1	4	4	6	3	4	2	6	8	28	16	44	0·02	0·01
.. ...	10	9	10,160	178	16	6	24	11	18	10	14	23	14	20	23	149	53	202	0·1	0·05
al ...	54	40	20,010	250	33	12	36	27	28	35	24	41	22	34	46	260	108	368	0·05	0·02
DIVISION.																				
... ...	21	12	6,087	17	9	3	5	3	1	4	2	4	5	8	4	44	6	50	0·06	0·08
... ...	32	27	3,838	37	8	7	21	6	6	6	5	4	14	7	13	66	35	101	0·09	0·04
... ...	10	5	3,134	8	3	...	2	1	3	1	1	1	1	1	...	12	4	16	0·03	0·01
.. ...	35	20	4,642	79	5	9	13	14	17	22	11	3	8	11	12	87	56	143	0·09	0·06
" ...	13	3	3,013	4	...	...	...	...	2	...	1	3	...	1	...	4	3	7	0·01	0·006
al ...	111	67	20,714	145	25	19	41	24	29	83	20	15	28	28	29	213	104	317	0·06	0·03
ince ...	270	196	67,879	1,214	308	190	309	236	214	211	267	249	267	249	322	1,870	1,243	3,113	0·1	0·07

27 11

Annual Form No. XII.—Deaths registered from Plague in stricts of Bihar Province, during each month of the year 1939.

	3		4		5												6			7		
	Circles of Registration.		Villages.														Total.			Ratio of deaths per 1,000 of population.		
	Number in each district.	Number from which Plague deaths from were reported.	Number in each district.	Number from which Plague deaths from were reported.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Male.	Female.	Total.	Male.	Female.	Total.
N.																						
...	20	...	2,315	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	*16*	...	6,058	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	17	3	4,735	8	...	...	...	2	13	...	...	...	5	6	6	17	19	30	49	0·02	0·03	0
...	53	3	13,108	8	...	...	...	2	13	...	...	...	5	6	6	17	19	30	49	0·005	0·01	0·
N.																						
...	13	8	4,305	86	132	202	570	399	63	17		10	5	2	...	45	617	830	1,447	0·5	0·6	
...	11	2	2,548	15	12	8	11	21	...	2	...	...	...	...	...	5	20	39	59	0·02	0·04	0
...	14	5	4,059	40	13	16	63	32	1	16		16	63	63	13	...	106	222	328	0·07	0·1	
...	14	...	3,135	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	52	15	14,047	141	157	226	644	452	64	35		26	68	65	13	50	743	1,091	1,834	0·1	0·2	
ION.																						
...	13	...	2,010	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	14	6	3,080	13	...	...	...	...	...	...	...	...	...	...	...	55	18	37	55	0·02	0·03	0·
...	17	...	4,160	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	10	...	10,160	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	54	6	20,010	13	...	...	...	...	...	...	...	...	...	...	...	55	18	37	55	0·004	0·008	0·0
...	21	...	6,087	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	32	...	3,838	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	*10*	...	3,134	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	35	...	*4,642*	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	13	...	3,013	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	111	...	20,714	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
..	270	24	67,879	162	157	226	644	454	77	35	[illegible]	26	73	71	19	222	780	1,158	1,938	0·04	0·07	0·06

APPENDIX II.

Provincial.

Statement showing details of registration in areas in which it is compulsory.

Registration area.	Population according to Census of 1931.	Probable number of births at the rate of 286 per 1,000 married women between the ages of 15 and 40.	Actual number of births registered during the year.	Probable birth-rate per *mille* (columns 2 and 3).	Registered birth-rate per *mille* during the year.	Number of deaths registered during the year. Including deaths in dispensary.	Number of deaths registered during the year. Excluding deaths in dispensary.	Death-rate per *mille*. Including deaths in dispensary.	Death-rate per *mille*. Excluding deaths in dispensary.	Number of persons prosecuted under Act IV (B. C.) of 1873.	Number of persons con-
1	2	3	4	5	6	7	8	9	10	11	12
... ...	159,690	Not available.	2,610	Not available.	16·3	1,973	1,226	13·3	7·6	...	...
... ...	46,994		591		12·6	353	49	7·5	1·0	...	...
amat	24,321		59		2·4	50	59	2·0	2·4	...	...
... ...	9,750		112		11·4	77	50	7·9	5·1	...	...
... ...	7,412		95		12·8	42	...	5·7	...	...	...
... ...	88,005		2,978		33·8	3,559	427	40·4	4·8	...	...
... ...	5,481		223		40·6	132	2	24·0	0·3	...	...
... ...	11,699		384		32·8	236	7	20·2	0·6	...	...
... ...	48,922		498		10·1	189	159	3·8	3·2	...	...
... ...	13,449		302		22·4	111	41	8·2	3·1	...	...
... ...	14,421		234		16·2	25	53	1·7	3·6	...	...
... ...	9,661		123		12·7	25	11	2·6	1·1	...	...
... ...	25,175		492		19·6	216	47	8·6	1·8	...	...
... ...	6,002		153		25·5	55	25	9·1	4·1	...	...
... ...	47,448		1,327		27·9	1,098	229	23·1	4·8	...	...
... ...	8,812		379		43·0	197	...	22·3	...	...	...
... ...	14,215		715		50·3	316	80	22·2	5·6	...	...
... ...	27,941		761		27·2	337	234	12·0	8·3	...	...
pur	17,545		294		16·8	84	102	4·7	5·8	...	...
i	43,049		672		15·6	572	194	13·2	4·5	...	...
... ...	10,701		263		24·5	226	56	21·1	5·2	...	...
... ...	19,299		646		33·4	450	29	23·3	1·5	...	...
ga	9,192		342		37·2	187	...	20·3	...	...	...
h	60,676		2,022		33·3	1,209	358	19·9	5·9	...	...
ipur	8,869		215		24·2	124	2	13·9	0·2	...	...
bani	9,891		235		23·7	99	42	10·0	4·2	...	...
yr	18,789		508		27·0	208	45	11·0	3·4	5	...
ur	52,863		1,195		22·6	679	203	12·8	3·8	4	...
pur	30,346		1,052		34·7	511	17	16·8	0·5	...	...
g	83,847		728		8·7	607	293	7·2	3·5	...	...
... ...	5,233		140		26·7	117	...	22·3	...	...	...
ganj	15,474		368		23·8	398	191	25·7	13·3	...	...
r	8,946		185		20·6	101	102	11·2	11·4	...	...
ganj	15,864		320		20·1	208	60	13·1	3·8	...	...
ganj	5,939		97		16·3	83	...	13·9	...	...	...
ar	15,883		71		4·4	39	37	2·4	2·3	...	...
... ...	14,217		94		6·6	72	3	5·0	5·1	...	...
pur	9,471		67		7·0	30	133	3·2	14·0	...	...
bagh	8,965		51		5·6	33	16	3·6	1·7	...	...
... ...	20,977		412		19·7	151	138	7·2	6·5	...	...
... ...	8,758		294		33·6	112	22	12·8	2·5	...	...
... ...	21,122		123		5·8	58	41	2·7	1·9	...	...
aga	50,517		877		17·3	426	324	8·4	6·4	...	...
ganj	7,577		184		24·3	75	9	9·9	1·1	...	...
ia	12,040		174		14·4	56	70	4·6	5·8	...	...
unathpur	25,974		393		15·1	246	148	9·5	5·7	...	...
dah	7,139		206		28·9	134	4	18·7	0·5	...	...
nbad	6,924		133		19·1	73	...	10·5	...	...	...
basa	16,356		493		30·1	326	143	19·9	8·7	...	...
kradharpur	10,786		280		25·9	169	66	15·7	8·1	...	...
saslai	11,191		131		11·7	80	15	7·1	1·3	...	...
mshedpur	8,721		140		16·0	90	...	10·3	...	...	...
... ...	89,798		846		10·1	458	420	5·5	15·0	...	...
(c) Total ...	1,455,160		26,266		18·3	174,802	6,052	11·7	4·0	9	...

(c) ...

APPENDIX III.

JHARIA MINING AREA.

Statistics of Epidemic Diseases.

1939.

Month.	Total births.	Total deaths.	Influenza. Cases.	Influenza. Deaths.	Cholera. Cases.	Cholera. Deaths.	Small-pox. Cases.	Small-pox. Deaths.	Plague. Cases.	Plague. Deaths.
1	2	3	4	5	6	7	8	9	10	11
January	149	100	463	3	1	1	18	3	...	...
February	145	75	554	2	4	...	73	2	...	...
March	147	113	728	1	3	1	127	3	...	...
April	116	116	467	...	4	...	164	9	...	...
May	141	116	548	1	...	...	119	15	...	...
June	149	79	480	...	5	2	62	9	...	...
July	168	131	675	1	16	6	43	13	...	...
August	176	141	882	...	34	9	51	12	...	...
September	169	130	1,266	...	6	1	21	6	...	...
October	194	82	838	2	...	...	7	2	...	...
November	167	74	672	...	...	...	16	2	...	...
December	175	89	282	...	...	...	36	4	...	...
Total ...	1,896	1,336	7,955	10	63	20	737	80	...	...
Ratio per mille	14·7	9·6	62·0	0·07	0·4	0·1	5·7	0·6	...	...

N.B.—The figures relate to the labour population only and the ratios are calculated accordingly.

APPENDIX IV.

Summary of the activities of the Public Health Circle of Public Works Department, relating to the sanitary improvements in urban and rural areas in Bihar during the calendar year 1939.

I. Projects.—The following major projects were prepared and submitted during the year under review :—

	Rs.
(*a*) Water-supply to Gulzarbagh Press area	13,589
(*b*) Arrah Road watering and drain flushing scheme ..	5,583
(*c*) Drainage scheme for Darbhanga municipality (forecast) ..	2,98,236
(*d*) Patna Bankipur Water Works maintenance for the year ending 30th June 1940.	1,23,869
(*e*) Patna drainage maintenance for 1939-40	28,820
(*f*) Patna-Bankipur Water Works—Extension of C. I. mains for the improvement of lanes.	27,262
(*g*) Construction of two additional tube-wells for Muzaffarpur municipality.	66,180
(*h*) Earthquake damage repairs to water-supply at Muzaffarpur ..	95,317
(*i*) Arrah-water supply reorganisation scheme	3,45,978
(*j*) Installation of Bulk meters for Patna-Bankipur Water Works	19,614
(*k*) Drainage scheme for Mithapur area (preliminary scheme) ..	8,450
(*l*) Kadam Kuan water supply—Head works	1,11,281 (full scheme).
Minor schemes to the total value of	1,30,642
Government work	93,435
Deposit work	37,207

were prepared and submitted to authorities concerned during the year under review.

II. Construction.

	Rs.
(*a*) Luathaha water-supply scheme—estimate Expenditure to end of December 1939 were completed.	74,052
(*b*) Darbhanga medical scheme water-supply sanitary installation and drainage scheme work practically completed.	72,320
Estimate	1,59,705
Expenditure to end of December 1939	1,52,646
(*c*) Construction of latrines and urinals in the compound of New Civil Court, Patna—work is in progress.	
Estimate	6,698
Expenditure to end of December 1939	4,726
(*d*) Additional 5" tube-well with pumping plant at Sonepur—work practically completed—	
Estimate	16,734
Expenditure to end of December 1939	14,558
(*e*) Patna University sewerage and sanitary installation—work completed—	
Estimate	52,000
Expenditure to end of December, 1939	44,709
(*f*) Bihar College of Engineering sewerage and sanitary installation—Excepting construction of Day latrines for Engineers' hostel and laying of water mains—work has been completed.	
Estimate	22,278
Expenditure to end of December 1939	17,086

	Rs.
(*g*) Monghyr water-supply extension—Re-arrangement of distribution system due to new town planning area—works completed.	
Estimate	42,865
Expenditure to end of December 1939	39,314
(*h*) Bhagalpur water-supply re-organization scheme (work practically completed)—	
Estimate	5,03,174
Expenditure to end of December 1939	4,74,718
(*i*) Water-supply to the Central Jail at Buxar—Work is in progress.	
Estimate	21,457
Expenditure during December 1939	2,366
(*j*) Converting existing service latrine into water flushed types at Phulwari Camp Jail. Estimate under preparation. Government in memo. no. 11479-B, dated the 21st December 1939 authorised Superintending Engineer, Public Health Circle to incur expenditure to the extent of (during the year 1939-40).	7,200
(*k*) Bihar Drain Flushing Scheme—Work is in progress—	
Estimate	6,412
Expenditure to end of December 1939	3,237
(*l*) Bhabua Drainage scheme (supplementary scheme) work is in progress.	
Estimate	11,764
Expenditure to end of December 1939	6,099
(*m*) Patna Drainage and sewerage maintenance on behalf of the Patna City municipality during 1939-40—	
Estimate	28,820
Expenditure to end of December 1939	13,120
(*n*) Repairs and maintenance to Patna Bankipur water-supply for the year ending 30th June 1940. The system was maintained efficiently during the year under review—	
Estimate	1,23,869
Expenditure up to December 1939	99,720
(*o*) Patna Main drainage scheme—work is in progress—Major portion of the scheme has been completed—	
Estimate	9,17,000
Expenditure to end of December 1939	7,25,728

The total value of work carried out by this Circle during the calendar year 1939 is Rs. 4,53,814 of which Government work is Rs. 2,11,155 and deposit work is Rs. 2,42,659.

The 1st May 1940.

Sd. H. WHIPP,
Special Officer,
I/C Public Health Engineering Department, Bihar.

APPENDIX IV.

Summary of the activities of the Public Health Circle of Public Works Department, relating to the sanitary improvements in urban and rural areas in Bihar during the calendar year 1939.

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	Rs.
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Government work	93,435
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II. *Construction.*

	Rs.
(*a*) Luathaha water-supply scheme—estimate Expenditure to end of December 1939 were completed.	74,052
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Estimate	1,59,705
Expenditure to end of December 1939	1,52,646
(*c*) Construction of latrines and urinals in the compound of New Civil Court, Patna—work is in progress.	
Estimate	6,698
Expenditure to end of December 1939	4,726
(*d*) Additional 5" tube-well with pumping plant at Sonepur—work practically completed—	
Estimate	16,734
Expenditure to end of December 1939	14,558
(*e*) Patna University sewerage and sanitary installation—work completed—	
Estimate	52,000
Expenditure to end of December, 1939	44,709
(*f*) Bihar College of Engineering sewerage and sanitary installation —Excepting construction of Day latrines for Engineers' hostel and laying of water mains—work has been completed.	
Estimate	22,273
Expenditure to end of December 1939	17,086

	Rs.
(*g*) Monghyr water-supply extension—Re-arrangement of distribution system due to new town planning area—works completed.	
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Expenditure to end of December 1939	4,74,718
(*i*) Water-supply to the Central Jail at Buxar—Work is in progress.	
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Expenditure during December 1939	2,366
(*j*) Converting existing service latrine into water flushed types at Phulwari Camp Jail. Estimate under preparation. Government in memo. no. 11479-B, dated the 21st December 1939 authorised Superintending Engineer, Public Health Circle to incur expenditure to the extent of (during the year 1939-40).	7,200
(*k*) Bihar Drain Flushing Scheme—Work is in progress—	
Estimate	6,412
Expenditure to end of December 1939	3,237
(*l*) Bhabua Drainage scheme (supplementary scheme) work is in progress.	
Estimate	11,764
Expenditure to end of December 1939	6,099
(*m*) Patna Drainage and sewerage maintenance on behalf of the Patna City municipality during 1939-40—	
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Expenditure up to December 1939	99,720
(*o*) Patna Main drainage scheme—work is in progress—Major portion of the scheme has been completed—	
Estimate	9,17,000
Expenditure to end of December 1939	7,25,728

The total value of work carried out by this Circle during the calendar year 1939 is Rs. 4,53,814 of which Government work is Rs. 2,11,155 and deposit work is Rs. 2,42,659.

The 1st May 1940.

Sd. H. WHIPP,
Special Officer,
I/C Public Health Engineering Department, Bihar.

APPENDIX V.

Table showing health services in Rural and Urban areas of Bihar Province during the year 1939.

Rural areas.

Board.		Medical officers of Health. Holding D. P. H. Whole-time.	Part-time.	Licentiates L. M. P. Whole-time.	Part-time.	Epidemic staff.	Sanitary and Health Inspectors.	Vaccinators. Male.	Female.	School Medical Officers.	Other Health staff.
		2	3	4	5	6	7	8	9	10	11
...	...	1	...	...	...	...	12	94	...	...	32
...	...	1	...	4	...	...	...	100	...	...	24
...	...	1	...	...	...	...	5	120	...	...	11
...	...	...	...	...	...	...	...	...	...	2	...
...	...	1	...	...	...	9	3	88	...	...	...
...	...	1	...	...	...	49	11	87	...	...	3
...	...	1	...	1	...	9	13	202	...	...	...
				[illegible]		...	11	102	...		

Urban areas.

Municipalities.	Medical officers of Health. Holding D. P. H. Whole-time.	Part-time.	Licentiates (L. P. H. S.) Whole-time.	Part-time.	Sanitary and Health inspectors.	Vaccinators. Male.	Female.	Inspectors of vaccination.	School Medical Officers.
12	13	14	15	16	17	18	19	20	21
Patna City	1	...	...	...	5	7	...	...	...
Patna Administration Committee	...	1	...	...	3	1	...	...	...
Bihar	...	...	...	...	1	1	...	...	...
Dinapur Nizamat	...	...	...	...	1	1	...	...	...
Dinapur Cantonment ...	1 R.A.M.C.	...	...	...	1	1	...	...	...
Barh	...	...	...	...	1	1	...	...	...
Khagole	...	...	...	...	1	1	...	...	...
Gaya	1	...	...	...	3	2	...	...	...
Tikari	...	...	...	...	1	1	...	...	...
Daudnagar	...	...	...	...	1	...	...	...	...
Arrah	...	...	...	...	2	1	...	...	...
Buxar	...	...	...	...	1	1	...	...	...
Dumraon	...	...	...	...	1	1	...	...	...
Jagdishpur	...	...	...	...	...	1	...	...	...
Sasaram	...	...	...	...	1	1	...	...	...
Bhabua	...	...	...	...	1	1	...	...	...
... ...	...	...	...	...	...	...	...	...	...
Chapra	...	...	...	...	1	3	...	...	...
Revelganj	...	...	...	...	...	1	...	...	...
Siwan	...	...	...	...	...	1	...	...	...
Bettiah	...	...	1 L.M.P.	...	1	2	...	...	...
Motihari	...	...	...	...	1	1	...	...	...
Muzaffarpur	1	...	...	...	3	2	...	...	...
Sitamarhi	...	...	...	...	1	1	...	...	...
Hajipur	...	...	...	...	1	1	...	...	...
Lalganj	...	...	...	...	...	1	...	...	...
Darbhanga	1	...	...	...	1	2	...	...	...
Roserah	...	...	...	...	1	1	...	...	...
Samastipur	...	...	...	...	1	1	...	...	...

APPENDIX V—concld.

Table showing health services in Rural and Urban areas of Bihar Province during the year 1939—concld.

Rural areas.

...t Boards.	Medical Officers of Health. Holding D. P. H. Whole-time.	Part-time.	Licentiates L. M. P. Whole-time.	Part-time.	Epidemic staff.	Sanitary and Health Inspectors.	Vaccinators. Male.	Female.	School Medical Officers.	Other Health staff.
1	2	3	4	5	6	7	8	9	10	11
... ...	...	...	...	...	17	3	9	...	...	39
... ...	1	...	...	...	88	4	65	...	...	2
... ...	1	...	...	...	38	17	106	...	...	1
... ...	...	...	...	...	1	...	19	...	...	6
Division ...	...	...	...	...	...	...	...	...	2	...
... ...	...	...	...	...	9	1	8	...	...	16
... ...	...	...	...	...	1	4	6	...	...	...
... ...	...	...	...	...	3	2	30	...	...	...
... ...	1	...	2	...	3	4	41	...	...	...
... ...	...	...	...	...	...	...	2	...	...	...
...pur Division ..	...	...	...	...	...	...	...	...	2	...

Urban areas.

Municipalities.	Medical Officers of Health. Holding D. P. H. Whole-time.	Part-time.	Licentiates (L. P. H. S.) Whole-time.	Part-time.	Sanitary and Health Inspectors.	Vaccinators. Male.	Female.	Inspectors of Vaccination.	School Medical Officers.
12	13	14	15	16	17	18	19	20	21
Monghyr	1	...	...	...	1	2	...	...	...
Jamalpur	1	...	...	...	2	1	...	...	...
Bhagalpur	1	...	...	...	8	3	...	...	...
Colgong	...	...	...	...	...	1	...	...	...
Purnea	...	...	...	...	1	1	...	...	...
Kishanganj	...	...	...	...	1	1	...	...	...
Katihar	...	...	...	...	1	1	...	...	...
Forbesganj	...	...	...	...	...	1	...	...	...
Sahebganj	...	...	...	...	1	1	...	...	...
Deoghar	...	...	1	...	...	1	...	...	...
Dumka	...	...	...	...	...	2	...	...	...
Madhupur	...	...	...	...	1	1	...	...	...
... ...	...	...	...	...	...	...	...	...	...
Hazaribagh	...	...	...	...	1	1	...	...	...
Chatra	...	...	...	...	...	1	...	...	...
Giridih	...	...	...	...	1	1	...	...	...
Ranchi	1	...	...	...	2	2	...	...	...
Lohardaga	...	...	...	...	...	1	...	...	...
Daltonganj	...	...	...	...	1	1	...	...	...
Purulia	...	...	...	...	1	1	...	...	...
Raghunathpur	...	...	...	...	...	1	...	...	...
Jhalda	...	...	...	...	1	1	...	...	...
Dhanbad	...	...	...	...	2	...	...	...	...
Chaibassa	...	...	...	...	...	1	...	...	...
Chakradharpur	...	...	...	...	...	1	...	...	...
Jugsalai	...	...	...	...	2	2	...	...	...
Jamshedpur Notified Area ...	1	...	...	...	37	5	...	...	...
... ...	...	...	...	...	...	...	...	...	...

APPENDIX VI.

showing Maternity and Child Welfare Centres, health visitors and trained midwives in rural and urban areas in Bihar during the year 1939.

istrict.	Maternity and Child welfare Centres maintained by—						Trained visitors in Child Welfare and Maternity Centres.		Trained mid-wives employed in hospitals and dispensaries.		Trained *dais* employed in hospitals and dispensaries.		Remarks.
	Government.		Local and municipal bodies.		Other agencies.								
	Rural.	Urban.	Rural.	Urban.	Rural.	Urban.	Rural.	Urban.	Rural.	Urban.	Rural.	Urban.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14
...	...	6(a)	...	1(a)	...	3	...	8(b)	4	13	...	1	(a) Midwifery circle. (b) Including one maternity supervisor entertained by Government.
...	...	...	...	...	...	...	...	...	11	1	...	5	
bad ...	...	...	...	...	...	...	...	...	3	3	12	...	
arpur ...	...	...	...	...	...	1	...	1	1	4	1	2	
anga ...	...	...	...	1(a)	...	...	...	...	...	1	...	1	
...	...	...	...	1	...	...	...	...	...	...	5	4	
aran ...	...	...	...	...	...	...	...	...	2	7	...	...	
yr ...	...	...	...	...	...	1	...	1	1	...	...	2	
a ...	...	...	...	...	...	1	...	...	1	2	...	1	
alpur ...	...	...	...	...	...	...	...	...	2	1	3	...	
al Parganas	...	...	...	...	...	...	...	...	3	2	...	...	
hi ...	...	...	...	1(a)	...	1	...	1	3	1	...	12	
bhum ...	...	...	...	1(a)	3	...	...	...	...	2	5	5	
abhum ...	...	...	...	2	...	...	...	...	...	4	...	16	
man ...	...	...	...	...	...	...	...	...	1	1	...	...	
aribagh ...	...	...	...	...	...	1	...	...	2	4	...	...	
Total ...	...	6	...	7	3	8	...	11	34	46	26	49	

STATEMENT I.

30

11 D. P. H.

STATEMENT NO. I.—*Showing particulars of Vaccination in the districts of Bihar during the year 1938-39.*

istrict.	Population of district according to the census of 1931.	Average number of vaccinators employed throughout the season.	Total number of persons vaccinated. Male.	Female.	Total.	Average number of persons vaccinated by each vaccinator.	Primary Vaccination. Total.	Successful. Under one year.	One year and under six years.	Total of all ages.	Unknown.	Re-vaccination. Total.	Successful.	Unknown.	Percentage of successful cases in which the results were known. Primary.	Re-vaccination.	Persons successfully vaccinated per 1,000 of population.	Total cost of Vaccination Department.	Number of all successful vaccinations and re-vaccinations performed by the vaccination staff only.
2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
a Division.																		Rs. a. p.	
istrict excluding towns ...	1,846,474	99	43,662	35,078	78,740	803	63,[illegible]	12,295	50,139	63,265	204	15,250	5,161	7,617	99·96	67·61	01·5	3,306 0 0	81,340
owns ...		11	23,565	3,081	27,546	2,504	7,[illegible]	1,436	4,609	6,475	761	20,100	6,439	4,642	96·87	47·11			
istrict excluding towns ...	2,358,462	95	54,982	42,136	97,118	1,022	76,[illegible]	14,172	58,086	74,164	2,485	20,229	4,018	12,843	99·67	62·52	34·72	1,552 4 0	81,877
owns ...		4	1,986	1,354	3,330	835	2,[illegible]	1,368	990	1,688	14	1,044	378	88	74·00	30·54			
istrict excluding towns ...	1,993,489	120	41,831	32,025	73,856	615	6[illegible]	13,104	11,385	65,340	423	7,901	6,707	878	99·71	95·50	43·37	1,467 6 0	76,490
owns ...		7	4,539	2,608	7,147	6,216	3,[illegible]	108	922	3,290	37	3,820	3,086	734	100·00	100·00			
istrict excluding towns ...	6,228,425	314	140,475	109,239	249,714	795	206,[illegible]	39,571	120,210	202,778	3,112	43,380	16,456	21,338	99·78	74·79	30·15	6,415 10 0	239,707
owns ...		22	30,089	7,943	38,032	1,774	13,[illegible]	2,932	6,521	11,453	812	24,964	9,963	5,464	93·44	50·78			
t Division.																			
istrict excluding towns ...	2,486,468	88	59,135	43,631	102,756	1,068	83,[illegible]	13,694	62,690	82,266	671	19,229	6,404	8,085	99·28	57·46	37·09	1,084 11 6	92,964
owns ...		5	4,725	2,533	7,258	...	2,[illegible]	564	1,412	2,074	209	4,935	1,501	2,772	99·00	68·76			
strict excluding towns ...	2,145,687	90	56,663	40,193	96,859	1,076	61,[illegible]	11,903	48,264	60,068	787	35,016	9,888	16,266	99·38	52·73	33·09	790 2 0	72,272
wns ...		2	1,592	777	2,369	1,184	1,[illegible]	414	706	1,132	7	1,175	564	180	94·80	48·00			
strict excluding towns ...	2,041,025	58	130,440	87,465	217,905	8,756	114,[illegible]	20,440	93,311	114,289	70	103,259	36,856	36,123	99·60	35·61	53·44	1,049 8 0	154,235
wns ...		6	3,422	2,149	5,571	928	2,[illegible]	564	1,810	2,397	13	3,137	683	1,785	98·41	21·72			
strict excluding towns ...	3,166,094	102	74,986	63,416	138,402	1,357	107,[illegible]	16,733	90,369	107,500	21	30,799	12,271	9,296	99·90	39·84	35·42	1,339 0 0	124,814
vns ...		5	5,904	3,198	9,102	1,820	2,[illegible]	316	2,263	2,581	3	6,515	2,462	1,299	99·76	37·78			
trict excluding towns ...	10,739,274	333	321,224	234,698	555,922	1,645	367,[illegible]	62,170	294,634	364,7[illegible]3	1,549	188,303	65,419	69,770	99·63	58·65	41·32	4,763 15 6	441,275
ns ...		18	15,643	8,657	24,300	1,350	8,[illegible]	1,858	6,321	8,184	235	15,782	5,210	6,027	93·68	53·40			
Division.																			
rict excluding towns ...	2,287,154	64	1[illegible]0,452	66,216	176,668	2,760	65,[illegible]	10,878	51,598	62,628	2,609	111,409	1,445	108,453	99·96	49·22	20·31	6,2[illegible]5 10 0	67,048
ns ...		3	16,798	7,413	24,210	8,736	2,[illegible]	989	1,168	2,157	275	21,770	796	20,006	99·63	47·71			
ict excluding towns ...	2,234,632	32	100,226	58,881	159,107	4,972	58,[illegible]	27,467	30,957	58,625	184	100,163	41,966	40,147	99·77	74·02	18·73	3,511 11 6	109,494
ns ...		4	4,598	2,169	6,767	1,691	2,1[illegible]	466	1,627	2,147	2	4,018	1,774	1,165	100·00	51·37			
ct excluding towns ...	2,186,543	76	36,378	29,185	65,563	862	68,11[illegible]	20,606	34,606	55,953	956	7,453	2,682	3,732	96·28	38·67	27·83	8,923 13 9	60,841
s ...		4	2,091	1,134	3,225	895	1,301	850	800	1,190	44	1,924	337	1,053	91·16	17·51			
		74	39,334	27,790	67,124	907	46,04[illegible]	21,816	23,990	44,963	808	21,081	2,017	17,949	99·39	61·39	26·52	8,805 [illegible]	
		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	861	1,0[illegible]	1,09[illegible]	[illegible]	12,527	[illegible]	3,013	98·90	45·60			

District.	Population of district according to the census of 1931.	Average number of vaccinators employed throughout the season.	Total number of persons vaccinated.			Average number of persons vaccinated by each vaccinator.	Primary [vac]cination.					Re-vaccination.			Percentage of successful cases in which the results were known.		Persons successfully vaccinated per 1,000 of population.	Total costs of Vaccination Department.	Number of all successful vaccinations and re-vaccinations performed by the vaccination staff only.
			Male.	Female.	Total.		Total.	Successful. Under one year.	One year and under six years.	Total of all ages.	Unknown.	Total.	Successful.	Unknown.	Primary.	Re vaccination.			
2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
[N]agpur Division.																		Rs. a. p.	
District excluding towns ...	1,517,357	47	38,252	31,628	69,880	1,497	43,[illegible]	18,467	22,911	42,017	535	26,673	7,433	11,219	98·46	48·03	35·30	4,753 0 3	51,900
Towns		3	3,738	2,173	5,011	1,970	1,[illegible]	607	980	1,585	...	4,326	600	3,343	100·00	60·02			
District excluding towns ...	1,867,140	48	26,445	22,673	49,118	1,023	35,[illegible]	30,243	5,526	35,946	1	13,146	8,560	2,004	99·93	76·83	38·72	5,971 8 3	60,684
Towns		5	12,649	7,904	20,553	4,111	[illegible]	1,785	981	2,770	...	17,783	11,809	2,210	100·00	85·33			
District excluding towns ...	918,736	30	17,518	11,467	28,985	966	15,[illegible]	6,857	7,482	15,361	485	13,031	5,907	4,018	96·28	45·33	27·07	4,111 8 6	22,170
Towns		1	281	517	1,498	1,498	[illegible]	130	129	271	1	1,225	403	214	99·27	32·81			
District excluding towns ...	1,810,890	48	64,137	42,686	1,06,823	1,463	55,[illegible]	14,951	14,360	37,817	1,[illegible]51	51,789	27,733	11,157	90·05	68·25	38·92	3,855 0 0	70,497
Towns		5	5,654	2,437	8,091	1,618	1[illegible]	470	1,061	1,588	27	6,455	3,359	2,556	98·07	86·15			
District excluding towns ...	929,803	28	11,525	9,910	21,435	765	15[illegible]	12,3[illegible]6	5,385	17,809	766	2,611	1,106	990	98·62	68·23	38·73	3,525 4 6	36,013
Towns		10	60,320	34,963	95,283	9,528	6,[illegible]	2,973	2,325	5,521	639	88,732	9,708	12,111	93·88	12·67			
District excluding towns ...	6,643,934	223	157,877	118,364	276,241	1,238	169,[illegible]	82,854	55,664	148,950	2,838	107,250	49,739	29,388	89·64	64·10	35·56	19,216 5 6	241,374
Towns		24	83,342	47,994	131,336	5,472	12,[illegible]	5,965	5,476	11,735	667	118,521	25,878	20,434	96·60	26·38			
District excluding towns ...	32,371,434	1,099	905,966	644,373	1,550,339	1,410	971,[illegible]	265,442	610,659	938,640	12,056	579,039	183,974	290,777	97·85	63·82	37·32	55,963 1 3	1,148,176
Towns		79	160,350	20,146	240,496	3,044	42,[illegible]	13,951	22,853	38,848	2,127	198,106	40,625	57,222	96·49	33·08			
Total		1,178	106,316	724,519	1,790,835	1,520	1,013,[illegible]	279,393	633,511	977,488	14,183	777,145	230,599	347,099	97·79	33·37			
Jails	...	...	31,449	751	32,200	...	[illegible]	9	14	400	150	31,642	11,429	5,972	88·30	44·52	...	...	...
Cantonments ...	...	...	1,587	960	2,547	...	[illegible]	288	451	752	69	1,710	205	150	95·30	13·14	...	...	...
Total of dispensary staff ...	...	...	1,955	612	2,567	...	1,[illegible]	99	355	798	72	1,567	1,060	290	85·99	83·00	...	...	...
[Priv]ate medical practitioners ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
[Staf]f of Railway Dispensaries ...	...	...	2,348	864	3,212	...	[illegible]	87	90	497	14	2,685	1,113	330	96·88	47·26	...	...	...
[Rail]way Collieries and Mines ...	...	...	2,312	752	3,064	...	[illegible]	170	347	562	17	2,436	1,199	579	91·97	64·45	...	...	...
Cooly Depots	...	...	1,659	1,179	3,036	...	13[illegible]	...	...	...	113	2,902	...	4,670	...	...	...	...	...
Grand Total ...	1,365	...	1,107,925	729,636	1,837,461	...	1,017,3[illegible]	280,046	634,768	980,497	14,573	820,087	245,605	359,190	97·77	33·98	...	...	...

SUMMARY.

	Total number of persons vaccinated.		Total number of operations performed.		Percentage of successful cases in which the results were known.		Average number of persons vaccinated by each vaccinator.		Number of children successfully vaccinated.		Ratio of successful vaccinations per 1,000 of population.	Total cost of Vaccination Department.
	Primary.	Revaccination.	Primary.	Revaccination.	Primary.	Revaccination.	Vaccinators employed.	Persons vaccinated by each vaccinator	Under one year.	One year and under 6 years.		
1	2	3	4	5	6	7	8	9	10	11	12	13
												Rs. a. p.
…CIAL STAFF.												
)	1,013,690	777,145	1,013,690	777,145	97·79	33·37	1,178	1,520	379,393	563,611	37·32	55,962 1 3
…R AGENCIES.												
…nd Mines, and Rail… …spensaries, Railways …epôts, Jails and Can…s.	3,684	42,942	3,684	42,9[illegible]2	91·35	31·49	...	...	10,653	1,257		
…otal	1,017,374	820,087	1,017,374	820,087	97·77	33·98	1,178	1,520	280,046	564,768	37·32	55,962 1 3

COMPARATIVE STATEMENT NO. II.—Showing the percentage of persons primarily vaccinated to the total number of vaccinations performed in the Province of Bihar in each of the undermentioned official years.

Establishments.	Years.									
	1930-31.	1931-32.	1932-33.	1933-34.	1934-35.	1935-36.	1936-37.	1937-38.	1938-39.	1939-40.
1	2	3	4	5	6	7	8	9	10	11
Government staff	9·56	9·89	...	4·02	5·22	17·3	...	11·94	15·42	16·01
Dispensaries	9·45	75·00	14·06	58·58	24·94	48·21	24·44	...	...	2·00
Municipal	64·03	67·13	39·88	29·00	33·07	22·57	30·62	39·62	25·22	56·11
District Board	70·70	64·30	38·61	17·94	42·69	61·90	66·32	54·49	58·07	62·11
Licensed vaccinators ...	92·75	97·29	90·97	84·19	70·93	...	...	90·83	83·95	84·82
Railways and collieries ...	34·23	28·78	21·47	9·04	5·97	13·12	39·15	15·19	28·78	39·75
Jails	1·11	0·78	2·20	0·89	1·33	4·86	3·23	1·03	1·82	2·90
Cooly Depôts	0·45	1·42	7·29	5·07	3·09	11·17	24·96	13·86	5·04	6·03
Cantonments	89·21	94·03	53·81	73·73	60·81	30·06	91·62	3·95	58·85	54·9[illegible]

STATEMENT NO. III.—Showing particulars of vaccinations ***verified*** *by Inspecting Officers during the year 1939-40.*

t.	Total number of persons vaccinated. Primary.	Total number of persons vaccinated. Re-vaccination.	Total number inspected— By Assistant Directors of Public Health or Superintendent of Vaccination. Assistant Directors of Public Health. Primary.	Re-vaccination.	Superintendent of vaccination. Primary.	Re-vaccination.	Other Inspecting Officers. District Inspectors and Health Inspectors. Primary.	Re-vaccination.	Sub-Inspectors or Health Inspector. Primary.	Re-vaccination.	Percentage of inspection to total number vaccinated. By Assistant Directors of Public Health or Superintendent of Vaccination. Assistant Director of Public Health. Primary.	Re-vaccination.	Superintendent of Vaccination. Primary.	Re-vaccination.	By Native Superintendents or other Inspecting Officers. District Inspectors and Health Inspectors. Primary.	Re-vaccination.	Sub-Inspectors or Health Inspector. Primary.	Re-vaccination.	Percentage of cases found successful to total number inspected. By Assistant Directors of Public Health or Superintendent of Vaccination. Assistant Directors of Public Health. Primary.	Re-vaccination.	Superintendent of Vaccination. Primary.	Re-vaccination.	By Native Superintendents or other Inspecting Officers. District Inspectors and Health Inspectors. Primary.	Re-vaccination.	Sub inspectors or Health Inspector. Primary.	Re-vaccination.	Percentage of successful cases reported by vaccinators. Primary.	Re-vaccination.
	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
...	72,701	40,800	1,534	...	1,246	...	...	...	9,991	...	2·97	...	1·75	...	...	...	13·91	...	97·41	...	99·91	...	...	...	96·59	...	63·3	38·06
...	79,184	21,273	4,682	1,523	...	...	7,008	3,266	...	...	5·91	8·13	...	...	8·93	12·09	...	...	94·40	...	97·51	100·00	90·51	...	...	...	87·22	93·21
...	69,316	5,161	...	...	5,751	229	...	...	7,312	..	...	..	8.29	1·51	...	...	10·50	...	...	...	100·0	100·00	...	...	100·0	...	99·70	95·50
...	85,830	26,132	..	...	691	...	...	...	15,476	...	...	...	0·80	...	...	...	18·03	..	...	...	99·13	...	...	...	99·12	...	98·00	33·00
...	63,037	36,191	...	...	4,904	1,206	6,051	2,418	25,776	248	...	...	7·77	3·33	9·59	8·68	40·89	0·64	...	...	99·40	30·68	99 19	49·24	99·27	58·87	98·06	28·88
...	117,080	106,396	...	...	11,092	...	19,421	...	78,812	7,971	67·31	...	9·47	...	16·58	...	67·31	7·45	...	...	99·98	...	99·89	...	99·60	48·55	99·61	35·28
... ...	110,495	40,265	3,624	...	5,897	128	8,820	306	31,734	7,482	3·27	...	5·83	0·31	7·98	0·75	28·71	18·58	...	...	99·76	35·15	90·54	39·87	99·77	53·35	99·82	36·67
... ...	67,699	133,179	1,559	12	1,681	61	6,046	315	16,776	171	2·30	0·01	2·48	0·04	8·90	0·23	24·78	0·12	100·00	100·00	100·00	95·36	99·93	75·87	99·63	33·92	99·93	48·51
...	61,103	111,491	371	1,217	2,856	7	3,603	189	4,587	1,341	0·60	1·09	4 84	0·006	6·11	0·18	7·78	1·33	99·81	98·00	99·54	100·00	98·13	100·00	97·81	100·00	99·46	44·89
... ...	59,411	11,235	1,400	...	2,110	...	3,985	193	17,025	1,524	2·34	...	3·35	...	6·71	1·07	28·65	13·56	96·00	...	94·78	...	95·48	48·18	93·97	33·59	98·18	32·91
ganas ...	48,370	37,027	..	...	442	...	2,917	76	13,133	1,365	...	...	0·91	...	6·03	0·20	27·15	3·68	83·43	...	100·00	...	95·47	68·43	89·43	17·21	97·43	19·61
h ...	44,794	31,624	...	...	...	...	2,841	111	7,520	211	..	...	...	...	6·34	0·35	16·79	0·36	...	...	...	...	93·38	56·75	93·62	68·72	97·34	26·23
... ...	39,013	32,754	...	.	553	1,630	4,245	...	15,868	2,435	...	..	21·61	9·21	11·64	...	43·53	16·98	...	...	100·00	48·00	100·00	...	99·59	80·41	99·93	78·72
... ...	16,227	16,090	483	..	878	7	1,984	169	2,419	132	2·99	...	4·51	0·04	12·23	0·68	14·91	0·81	...	...	98·75	71·43	97·68	70·64	96·19	76·53	98·33	40·63
a	56,990	65,563	937	...	2,020	...	4,597	1,842	...	...	1·88	...	4·06	...	9·25	4·21	...	...	97·93	...	100·00	...	93·08	59·41	...	...	99·99	60·05
m ...	26,124	94,906	...	..	774	4	2,754	...	4,110	302	...	..	2·96	0·004	10·54	...	15·73	0·32	99·47	...	99·48	100·00	97·78	...	97·88	71·85	97·11	15·08
L	1,017,374	820,087	14,590	2,752	40,895	3,372	74,272	8,825	250,539	23,172	1·43	0·33	4·02	0·39	7·30	1·07	24·62	2·82	100·11	45·61	87·49	59·43	93·92	45·29	80·43	40·12	99·10	49·09

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11 DPH

STATEMENT NO. II.—Showing side by side the ratios per mille of population of the ten year.

District.	1930-31. Ratio of deaths from small-pox.	1930-31. Ratio of successful vaccination per mille of population.	1931-32. Ratio of deaths from small-pox.	1931-32. Ratio of successful vaccination per mille of population.	1932-33. Ratio of deaths from small-pox.	1932-33. Ratio of successful vaccination per mille of population.	1933-34. Ratio of deaths from small-pox.	1933-34. Ratio of successful vaccination per mille of population.
1	2	3	4	5	6	7	8	9
Patna	0·23	25·86	0·30	26·19	0·68	41·13	0·56	35·65
Gaya	0·56	30·79	0·29	25·96	1·15	41·84	1·96	37·20
Shahabad	0·32	23·65	0·53	25·31	1·20	29·36	1·12	26·07
Saran	0·17	33·68	0·34	32·43	1·29	39·63	1·18	47·99
Champaran	0·06	20·98	0·12	20·44	0·85	27·41	1·06	31·13
Muzaffarpur	0·06	34·63	0·06	31·32	0·37	37·23	0·77	49·18
Darbhanga	0·18	35·54	0·17	32·47	0·44	37·89	0·45	34·29
Monghyr	0·42	30·35	0·16	28·85	0·57	32·96	1·33	31·44
Bhagalpur	0·08	34·53	0·07	34·15	0·41	37·20	1·06	47·24
Purnea	0·08	21·38	0·05	19·67	0·24	24·55	1·44	36·84
Santal Parganas	0·36	34·28	0·25	30·05	0·27	33·04	0·33	30·22
Hazaribagh	0·13	36·81	0·10	33·96	0·07	34·05	0·59	38·83
Ranchi	0·04	55·24	0·05	35·04	0·46	49·73	0·41	36·95
Palamau	0·43	33·58	0·23	37·35	0·31	23·96	0·51	28·68
Manbhum	0·13	38·93	0·05	30·53	0·02	32·57	0·16	35·58
Singhbhum	0·27	35·62	0·14	25·28	...	22·71	0·39	37·41
Total ...	0·21	32·20	0·18	28·99	0·57	34·67	0·89	37·24

deaths from small-pox and the ratios of successful vaccinations per mille of population during ending 1939-40.

District.	1934-35. Ratio of deaths from small-pox.	1934-35. Ratio of successful vaccination per mille of population.	1935-36. Ratio of deaths from small-pox.	1935-36. Ratio of successful vaccination per mille of population.	1936-37. Ratio of deaths from small-pox.	1936-37. Ratio of successful vaccination per mille of population.	1937-38. Ratio of deaths from small-pox.	1937-38. Ratio of successful vaccination per mille of population.	1938-39. Ratio of deaths from small-pox.	1938-39. Ratio of successful vaccination per mille of population.	1939-40. Ratio of deaths from small-pox.	1939-40. Ratio of successful vaccination per mille of population.
1	10	11	12	13	14	15	16	17	18	19	20	21
Patna	0·24	41·63	0·37	52·04	0·42	40·82	0·25	42·01	0·13	39·68	0·14	42·66
Gaya	0·58	30·12	0·57	35·75	0·69	34·18	0·45	33·41	0·31	34·28	0·30	33·24
Shahabad	0·39	20·97	1·34	29·97	1·08	34·34	0·27	31·62	0·27	36·50	0·25	35·32
Saran	0·14	23·31	0·19	28·32	0·48	33 77	0·41	34·12	0·35	35·60	0·34	34·98
Champaran	0·20	32·33	0·29	37·96	0·11	33·61	0·18	35·97	0·30	39·14	0·30	38·32
Muzaffarpur	0·15	50·36	0·17	47·32	0·09	43·76	0·03	39·76	0·11	44·60	0·12	46·51
Darbhanga	0·26	41·98	0·34	41·93	0·24	36·99	0·03	35·85	0·17	36·63	0·18	35·70
Monghyr	0·70	30·28	1·03	28·53	0·79	26·06	0·19	27·93	0·23	27·78	1·15	28·68
Bhagalpur	0·51	47·09	0·91	61·72	0·48	50·30	0·14	38·46	0·18	38·41	0·17	37 20
Purnea	2·55	41·36	2·16	38·87	1·43	29·05	0·11	28·85	0·07	27·81	0·08	26·78
Santal Parganas	0·57	28·19	0·74	27·03	1·09	24·25	0·22	25·41	0·06	26·88	0·07	25·90
Hazaribagh	0·81	34·12	0·79	31·71	0·27	31·51	0·04	29·51	0·03	31·27	0·04	30·19
Ranchi	0·10	34·07	0·03	30·94	0·05	31·32	0·03	30·93	0·05	32·15	0·06	29·19
Palamau	0·54	33 07	0·72	31·87	0·89	32·72	0·93	47·25	0·49	31·27	0·05	30·22
Manbhum	0·18	35·82	0·41	44·66	0·53	41·52	0·32	26·84	0·17	39·02	0·19	38·11
Singhbhum	0·59	35·29	0·62	58·38	0·80	38·50	0·13	34·19	0·02	35·44	0·03	34·52
Total	0·52	35·57	0·65	39·23	0·56	35·53	0·21	33·68	0·18	35·17	0·17	34·19

V.—Showing the protection afforded to in ants in each town in the Province of Bihar during the year 1939-40.

Town.	Number of births during the year ending 31st March 1940.	Number of deaths amongst infants under one year during the year ending 31st March 1940.	Number of successful vaccinations amongst infants under one year during the year ending 31st March 1940.	Date of extension of Vaccination Act to town.
2	3	4	5	6
Patna ...	2,867	191	1,019	1st October 1884.
Bihar ...	537	...	156	1st April 1887.
Dinapur ...	269	29	285	28th January 1891.
Barh ...	242	18	184	1st April 1887.
Khagole ...	275	16	92	12th July 1910.
Total ...	4,190	254	1,736	
Gaya ...	2,646	806	926	1st January 1883.
Tikari ...	206	24	75	3rd January 1891.
Daudnagar ...	397	62	223	Ditto.
Total ...	3,249	892	1,221	
Arrah ...	499	36	218	20th July 1885.
Buxar ...	292	25	155	1st April 1887.
Dumraon ...	228	9	66	Ditto.
Jagadispur ...	113	6	31	20th December 1890.
Sassaram ...	493	68	430	1st April 1887.
Bhabhua ...	148	15	22	Ditto.
Total ...	1,773	159	922	
Total of Patna Division.	9,212	1,305	3,982	
Chapra ...	1,257	130	122	1st April 1887.
Revelganj ...	415	55	146	12th December 1890.
Siwan ...	484	33	301	1st April 1887.
Total ...	2,156	218	569	
Motihari ...	277	13	35	1st April 1887.
		39	379	Ditto

STATEMENT NO. *V.—Showing the protection afforded to infants in each town in the Provi[nce] of Bihar during the year* 1939-40—contd.

District.	Town.	Number of births during the year ending 31st March 1940.	Number of deaths amongst infants under one year during the year ending 31st March 1940.	Number of successful vaccinations amongst infants under one year during the year ending 31st March 1940.	Date of extension o[f Vacci]nation Act to t[own.]
1	2	3	4	5	6
Muzaffarpur ...	Muzaffarpur ...	723	94	303	1st January 1[...]
	Sitamarhi ...	274	28	108	1st April 1887
	Hajipur ...	627	104	127	1st May 1890.
	Lalganj ...	274	32	4	1st April 1887
	Total ...	1,898	258	542	
Darbhanga ...	Darbhanga ...	2,039	1,324	189	24th May 188[...]
	Roserah ...	251	138	37	3rd January 1[...]
	Samastipur ...	233	116	47	25th July 1910
	Madhubani ...	450	220	43	1st April 1887.
	Total ...	3,063	1,798	216	
	Total of Tirhut Division.	8,121	2,326	1,741	
Monghyr ...	Monghyr ...	1,177	139	693	15th November
	Jamalpur ...	993	163	296	Ditto.
	Total ...	2,170	302	989	
Bhagalpur ...	Bhagalpur ...	713	80	390	15th February withdrawn on October 1895 extended on August 1898.
	Colgong ...	155	16	70	Ditto, re-extend[ed] 19th December
	Total ...	868	96	466	
Purnea ...	Purnea ...	251	41	127	1st July 1887.
	Kishanganj ...	129	25	135	12th November
	Katihar ...	436	50	85	8th August 191[...]
	Forbesganj ...	132	20	188	9th August 1912

...ENT NO. V.—Showing the protection afforded to infants in each town in the Province of Bihar during the year 1939-40—concld.

	Town.	Number of births during the year ending 31st March 1940.	Number of deaths amongst infants under one year during the year ending 31st March 1940.	Number of successful vaccinations amongst infants under one year during the year ending 31st March 1940.	Date of extension of Vaccination Act to town.
	2	3	4	5	6
s ...	Sahibganj ...	60	4	196	1st May 1884.
	Deoghar ...	69	9	268	Ditto.
	Madhupur ...	56	1	153	22nd August 1910.
	Dumka ...	55	5	244	Notifications, dated the 9th April 1884, and 23rd August 1910.
	Total ...	240	19	861	
	Total of Bhagalpur Division.	4,226	553	2,851	
...	Hazaribagh ...	352	29	330	1st January 1885.
	Chatra ...	262	24	218	1st August 1885.
	Giridih ...	113	9	59	8th September 1910.
	Total ...	727	62	607	
...	Ranchi ...	915	74	1,671	1st April 1887.
	Lohardaga ...	187	5	190	25th June 1882.
	Total ..	1,102	79	1,861	
...	Daltonganj ...	18	11	130	9th October 1890.
...	Purulia ...	468	30	180	1st January 1887.
	Raghunathpur ...	234	9	53	9th February 1894.
	Jhalda ...	168	19	148	9th July 1892.
	Dhanbad ...	522	37	29	5th December 1918.
	Total ...	1,392	95	410	
...	Chaibassa ...	271	16	222	20th June 1892.
	Chakradharpur ...	132	11	149	13th January 1919.
	Jugsalai ...	137	7	107	1st April 1924.
	Jamshedpur ...	921	46	2,495	10th January 1933.
	...	1,461	80	2,973	

ANNEXURE II.

ANNEX URE II.

Provincial Statement showing the different kinds of lymph [u]sed and their rates of success during the year 1938-39.

Primary vaccination.											
Direct from the calf.					With lanoline or glycerine lymph.					Arm-to-a[rm]	
Total.	Successful.	Unsuccessful.	Unknown.	Percentage of successful cases.	Total.	Successful.	Unsuccessful.	Unknown.	Percentage of successful cases.	Total.	Successful.
2	3	4	5	6	7	8	9	10	11	12	13
...	...	...	...	...	72,701	71,149	379	1,173	97·68	...	...
...	...	...	...	...	79,184	75,852	833	2,499	95·79	...	...
...	...	...	...	...	69,326	68,671	193	462	99·05	...	...
...	...	...	...	...	85,830	84,340	610	880	98·25	...	...
...	...	...	...	...	63,037	61,820	423	794	98·06	...	...
...	...	...	...	...	117,080	116,686	311	83	99·61	...	...
...	...	...	...	...	110,495	110,303	132	60	99·82	...	...
...	...	...	...	...	67,699	64,785	30	2,884	99·93	...	...
...	...	...	...	...	61,103	60,782	135	186	99·48	...	...
...	...	...	...	...	59,411	57,143	1,268	1,000	96·18	...	...
...	...	...	...	...	48,370	47,127	310	933	99·34	...	...
...	...	...	...	...	44,794	43,604	655	535	98·52	...	...
...	...	...	...	...	39,013	38,983	29	1	99·93	...	...
...	...	...	...	...	16,227	15,632	109	486	96·33	...	...
...	...	...	...	...	36.980	39,725	16,077	1,078	99·53	...	...
...	...	...	...	...	26,124	23,895	710	1,519	97·11	...	...
...	...	...	...	...	1,017,374	980,497	22,304	14,573	9·637	...	...

[Arm-to-arm] vaccination.			Re-vaccination.												
			Direct from the calf.					With lanoline or glycerine lymph.					Arm-to-arm v[accination]		
Unsuccessful.	Unknown.	Percentage of successful cases.	Total.	Successful.	Unsuccessful.	Unknown.	Percentage of successful cases.	Total.	Successful.	Unsuccessful.	Unknown.	Percentage of successful cases.	Total.	Successful.	Unsuccessful.
14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
...	...	...	...	...	...	...	...	40,800	14,537	11,412	14,851	35·40	...	...	...
...	...	...	...	...	...	...	...	21,273	4,996	3,346	12,931	23·48	...	...	...
...	...	...	...	...	...	...	...	15,161	10,818	316	4,027	71·35	...	...	...
...	...	...	...	...	...	...	...	26,132	8,624	6,315	11,193	33·76	...	...	...
...	...	...	...	...	...	...	...	36,191	10,452	9,293	16,446	28·88	...	...	...
...	...	...	...	...	...	...	...	106,396	37,539	30,946	37,911	35·28	...	...	...
...	...	...	...	...	...	...	...	40,265	14,769	14,632	10,864	36·67	...	...	...
...	...	...	...	...	...	...	...	133,179	2,261	2,399	128,519	48·51	..	...	...
...	...	...	...	...	...	...	...	111,491	48,712	21,059	41,720	43·68	...	...	...
...	...	...	...	...	...	...	...	11,235	3,698	2,552	4,985	32·91	...	...	...
...	...	...	...	...	...	...	...	37,027	7,263	7,079	22,685	50·64	...	...	...
...	...	...	...	...	...	...	...	31,624	8,296	8,728	14,600	48·73	...	...	...
...	...	...	...	...	...	...	...	32,754	21,701	6,584	4,469	77·08	...	...	...
...	...	...	...	...	...	...	...	16,090	6,533	3,840	5,712	40·63	...	...	...
...	...	...	...	...	...	...	...	65,563	33,283	20,758	13,713	53·38	...	...	...
...	...	...	...	...	...	...	...	94,006	12,118	68,224	14,564	15·08	...	...	...
...	...	...	...	...	...	...	...	8,200,871	245,605	215,292	359,190	29·94	...	...	...

[..]28—11-3-1941—HCDG& others.

No. 660-L.S.-G.

GOVERNMENT OF BIHAR.

LOCAL SELF-GOVERNMENT DEPARTMENT.

RESOLUTION.

Patna, the 10th February 1941.

READ—

The Public Health Report for the year 1939 and the Vaccination Report for the year 1939-40.

1. *Vital statistics.*—The total number of births and deaths decreased from 1,116,178 and 763,733 registered in the previous year to 1,077,780 and 744,765, respectively, registered in the year under review. The decrease in the number of deaths is due largely to fewer deaths from fever. The excess of birth over death-rate was 10·3 as compared with 10·9 in the previous year. Registration of births and deaths is compulsory only in the municipal areas. In the last few years the responsibility for collection, tabulation and verification of vital occurrences has been transferred from the police to some of the bigger municipalities which employ health officers; and experience shows that statistics collected by the municipalities are more reliable than those collected by the police. As an increasing number of municipalities appoint their own health officers, it is hoped that more of them will be in a position to undertake this work.

2. *Infant mortality.*—Government view with satisfaction the decrease in the rate of infant mortality from 119·8 per thousand in the previous year to 113·2 per thousand during the year under review. The mortality amongst male infants was higher than that amongst females in the ratio of 122 to 100. Though Maternity and Child Welfare Work is showing signs of improvement in the municipal areas, much still remains to be done specially in rural areas. It is satisfactory that some of the district boards have realised the importance of training indigenous *dais* but the work done so far only touches the fringe of the problem and much leeway has still to be made up.

3. *Cholera.*—The total number of deaths from cholera rose from 14,750 in the last year to 16,771 during the year under report and the corresponding death-rate from 0·4 to 0·5 per mille of population. The districts of Shahabad and Purnea and the towns of Colgong and Barh recorded the highest number of deaths from this disease. Of the other districts Bhagalpur, the Santal Parganas and Monghyr reported comparatively large numbers of deaths from cholera. Government deputed 35 doctors on epidemic duty to go to cholera infected areas whenever and wherever the staff of the local bodies was inadequate to cope with the situation, and disinfectants and cholera vaccine were distributed in such areas by the Public Health Department. The number of doses of cholera vaccine issued by that department during the year was 913,715 against 593,375 during the previous year. Anti-cholera inoculation has now become a popular preventive measure and the faith of the public in its efficacy is increasing.

4. *Bacteriophage.*—225,612 phials of choleraphage of 50 c. c. each and 1,000 ampoules of choleraphage of 5 c. c. each were prepared during the year in the Bacteriophage Laboratory, Patna. Most of it was issued to the local bodies and Civil Surgeons and about 12,000 phials were issued to Orissa. dysenteryphage was also prepared in the laboratory during the year as well as typhoidphage on a small scale. 1,712 phials of choleraphage and 1,738 ampoules of dysenteryphage were supplied to the Jail Department of the

province during the year. Bacteriophage was supplied to the Benares municipality and the State of Hyderabad on requisition and a sample of choleraphage was supplied to the Director of Public Health, United Provinces, at his request.

The Bacteriophage Laboratory was made permanent from the 1st April 1939. Besides the production of choleraphage the basic research on bacteriophage was also continued. As a result of its extensive use during the past years, choleraphage has fully established its utility both as a curative and as a prophylactic agent.

5. *Small-pox.*—The total number of deaths from small-pox rose from 5,977 in the previous year to 8,362 during the year under report though the death-rate from the disease remained the same, viz., 0·2 per mille of population. A study of the figures of mortality due to small-pox in this province from 1920 reveals a fairly well marked cyclic rise in the epidemicity of the disease during this period: the peak years were 1926 and 1933 while the lowest death-rate was recorded in 1922, 1929 and 1937. It has been suggested that this is due to the fact that as the effect of vaccination wears out in 5 to 7 years, the greatest accumulation of susceptible cases occurs in the peak years. As usual rural areas suffered more than towns. The highest death-rates were registered in the districts of Monghyr, Palamau and Shahabad. The districts of Singhbhum, Hazaribagh and Purnea recorded the lowest death-rates. The towns of Revelganj, Monghyr and Roserah reported the highest death-rates among urban areas. 1,837,461 vaccination operations were performed during the year under report of which 1,017,374 were cases of primary vaccination. Primary vaccination is compulsory in all the municipal towns and also in the rural areas of ten districts. The control of vaccination has been transferred to those local bodies which have taken up health organisation schemes. In such districts the inspection of vaccination is now carried out by the district health staff under a health officer who is appointed to be the Superintendent of Vaccination and the Government Vaccination Inspecting Staff has been withdrawn. The three Special Inspectors of Vaccination appointed by Government a few years ago, one under each of the three Assistant Directors of Public Health, continued to supervise the vaccination work during the year. It is hoped that in the near future all the district boards of the province will take over the direct control of this very important public health measure. Until they do so, there is no hope of making vaccination universally acceptable and providing facilities for the vaccination and revaccination of the entire population. It is a matter of regret that the province still continues to record a large number of deaths from this disease. A large number of children born every year escape even primary vaccination and the need for revaccination is not yet fully appreciated by the bulk of people.

6. *Plague.*—The number of deaths from plague rose from 1,838 in the previous year to 1,938 during the year under report. The death-rate remained the same as in the previous year, viz., 0·08 per thousand of population. Though the incidence of plague has greatly declined in the province during the last decade the disease still persists in isolated areas of the districts of Champaran, Saran, Muzaffarpur, Darbhanga and North Monghyr where the disease breaks out almost every year during the winter months. The district of Saran recorded the highest death-rate followed by Muzaffarpur and Champaran. Necessary preventive measures were taken by the Public Health Department; epidemic doctors were detailed on plague duty and extensive anti-plague inoculations were given to the people in the affected districts.

7. *Malaria.*—Though the number of deaths from fevers decreased from 615,966 in the previous year to 601,893 during the year under report, the incidence of malaria in the province was still noticeably high and is engaging the serious attention of Government. Over 80 per cent of the total deaths in the province are annually attributed to "fevers" and although a large number of deaths from other diseases in which fever is a prominent symptom are included under this group, it is believed that a large proportion of them is caused by malaria. As in the previous year North Bihar suffered heavily from malaria epidemics. The districts of Palamau, Purnea, Muzaffarpur, Hazaribagh and

Bhagalpur recorded the highest death-rates. Of the total number of 1,495,052 cases of malaria treated in hospitals and dispensaries of the province during the year under report 275,708 were treated in the district of Purnea alone. Sporadic cases of malaria, however, occur in every district of the province almost throughout the year. Vigorous measures were taken by Government for combating the disease. Epidemic doctors of the Public Health Department were detailed for malaria duty whilst 2,406 lbs. of quinine was distributed free by the department in malaria affected areas. A large number of anti-malarial centres and sub-centres were opened throughout the affected areas and Government contributed about half a lakh of rupees to local bodies for anti-malarial and anti-mosquito measures. Government also sanctioned the continuance of the three Tibbi and Ayurvedic centres in the district of Muzaffarpur for the treatment of malaria cases and provided funds for the opening of one new Tibbi centre and three new Ayurvedic centres in the same district.

8. *Kala-azar.*—To deal with the menace of Kala-azar which was mainly confined to North Bihar twenty Kala-azar centres with two sub-centres attached to each were opened by Government in Muzaffarpur, Darbhanga, Bhagalpur and Purnea. Of the 20 centres 8 were located in Purnea and 4 in each of the other three districts. The sub-centres were visited by medical officers of health twice a week. One special Kala-azar relief centre also functioned at Jori in the district of Hazaribagh. Altogether 11,848 cases of Kala-azar were treated in these places. 7,000 grms. of Kala-azar drugs were supplied by Government free of cost.

9. *School Medical Inspection.*—Out of 13,011 boys and 1,619 girls examined as many as 40·3 per cent of boys and 79·92 per cent of girls were found to be suffering from various forms of ailments such as enlarged tonsils, pyorrhea and carious teeth, mal-nutrition, errors of refraction, anaemia, etc. Defects of eye and heart and pulmonary tuberculosis were also noticed in some cases. The sincere co-operation of the parents or guardians, who are informed of any defects in the health of their wards, is needed for effecting any appreciable improvemont in the general health of the students. The scheme for providing mid-day school lunch for a monthly fee of annas eight per student introduced in Purulia Zila School in 1934 has now been taken up by quite a number of high schools in the province. Government are glad to note that the system is reported to be working very satisfactorily.

10. *Nutrition research.*—The Nutrition research scheme was sanctioned by Government as a temporay basis during the previous year. The object of the scheme is to suggest an adequate and balanced diet at a minimum cost and to advise on the nutritive value of each kind of food-stuff usually consumed by the people of Bihar. During the year under report a good deal of useful work was done by the Nutrition Officer and his staff. The field work comprising dietary and nutrition survey started in the Santal Parganas district towards the end of the year 1938 was completed during the year under report. Dietary investigations were carried out in the hostels attached to colleges all over the province and also among 22 aboriginal families in the district of the Santal Parganas and over 150 miners' families in the Jharia Coalfield area. Analytical work consisting of the assessment of food value of the edibles grown in this province was also done and ninety kinds of vegetables and fruits grown in this province were analysed for vitamins A and C contents. Besides this, a certain amount of propaganda work was done and lectures on 'Dietary' followed by magic lantern demonstrations were delivered to the rural health staff in the districts of Bhagalpur, Saran, Champaran and Muzaffarpur. Lectures on similar lines were delivered to students at the Government Sanitary School, Gulzarbagh, and the Rural Reconstruction Institute at Phulwarisharif in Patna district.

11. *Public Health Department—(Engineering Branch).*—A summary of the activities of this department relating to sanitary works in areas under the jurisdiction of the local bodies during the year is appended to the report.

12. The Publicity Bureau of the Public Health Department carried on, as usual, educative propaganda with a view to stimulate interest in matters affecting the health of the people. The bureau continued to distribute leaflets

and pamphlets in different vernaculars on health subjects in rural areas. Pictorial health charts and posters were exhibited at important fairs and at exhibitions held within the province. The officer in charge of the Public Health Bureau, Bihar, delivered lectures on hygiene and public health subjects to the organisers and supervisors of sugarcane growers' co-operative societies in the province during the period of their training in Patna. The Red Cross Health Museum was maintained as a section of the Patna Museum and continued to attract a large number of visitors from all parts of the province.

13. The office of the Director of Public Health was held by Lieut.-Col. S. L. Mitra, I.M.S., from the 1st January to the 10th April and again from the 28th June to the 31st December 1939 and by Rai Bahadur Dr. B. P. Mazumdar from the 11th April to the 27th June 1939. Government desire to thank both the officers for their efficient administration of the department and for the cordial relations which the department maintained with the local bodies during the year. Government have also noted the names of the subordinate officers commended in the report.

By order of the Governor of Bihar,

B. C. MUKHARJI,

Secretary to Government.

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1939–40